TOSHIBA

FILE NO. 023-200317

SERVICE MANUAL

COLOR TELEVISION

N3PSP Chassis

46H83

(TAC0354)

– SUMMARY –

46H83 is the same as 57H83 except for the parts tabled on back of this sheet.
Use this service manual together with the service manual of 51H83, 57H83, 65H83 (File No. 020-200307).

DOCUMENT CREATED IN JAPAN, Jul., 2003

REPLACEMENT PARTS LIST DIFFERENCES

Location No.	Part No.	Description
A001	23411864	Cabinet, Wood Cabinet Assy
A102	23527274	Grille, Speaker Grille Assy
A201	23530960	Cover, Bezel
A202	23450682	Panel, Control Panel Assembly
A213	23428212	Door
A223	23445733	Button, Power Button
A268	23530997	Cover, Bezel, Speaker
⚠A401	23530962	Cover, Back Cover
⚠A424	23530846	Cover, Back Board
A701	23067159	Carton
A703	23946513	Packing, Top Packing
A707	23946510	Packing, Bottom Tray Assy
C707	24797101	EL, 100μF, ±20%, 50V
C760	24797101	EL, 100μF, ±20%, 50V
C780	24797101	EL, 100μF, ±20%, 50V
C904	24436561	CD, 560pF
C914	24436561	CD, 560pF
C915	24679330	EL, 33μF, ±20%, 250V
C923	24436561	CD, 560pF
D902	23118859	Diode, 1SS133
D911	23118859	Diode, 1SS133
D916	23115337	Diode, 1S1834
D917	23118859	Diode, 1SS133
D918	23118859	Diode, 1SS133
D922	23118859	Diode, 1SS133
D924	23118859	Diode, 1SS133
D925	23118859	Diode, 1SS133
D931	23118859	Diode, 1SS133
D932	23118859	Diode, 1SS133
D933	23118859	Diode, 1SS133
D934	23118859	Diode, 1SS133
D939	23118859	Diode, 1SS133
D946	23118859	Diode, 1SS133
D961	23118859	Diode, 1SS133
D962	23118859	Diode, 1SS133
D963	23118859	Diode, 1SS133
D964	23118859	Diode, 1SS133
D965	23118859	Diode, 1SS133
D966	23118859	Diode, 1SS133
✻E031Z	23788600	CRT-D/R Board, PD1200A-1
✻E032Z	23788601	CRT-D/G Board, PD1200A-2
✻E033Z	23788602	CRT-D/B Board, PD1200A-3
✻E034Z	23788603	SVM/R Board, PD1200A-4
✻E035Z	23788604	SVM/G Board, PD1200A-5
✻E036Z	23788605	SVM/B Board, PD1200A-6
✻E041Z	23788806	FRONT-CON Board, PD1280-1
✻E042Z	23788807	FRONT-IN Board, PD1280-2
✻E043Z	23788808	REM Board, PD1280-3
✻E044Z	23788809	FRONT-SEN Board, PD1280-4
K501	23311017	Screen, Lenticular Sheet, SCREEN46KNHL
K502	23311018	Screen, Fresnel Sheet, SCREEN46KN-F
K503	23311020	Screen, Protector, SCR-PRO46KN
K601	23405273	Mirror, MIRROR46L
L903	23289101	Coil, Peaking, TRF4101AF
L911	23237987	Coil, Peaking, TRF4100AC
L912	23289101	Coil, Peaking, TRF4101AF

Location No.	Part No.	Description
L922	23289101	Coil, Peaking, TRF4101AF
L961	23238714	Coil, Peaking, TRF4100AJ
Q901	23314971	Transistor, 2SC5360(FA)
Q902	23114433	Transistor, 2SC1815-Y
Q911	23314971	Transistor, 2SC5360(FA)
Q912	23114433	Transistor, 2SC1815-Y
Q913	23114735	Transistor, 2SA1020-Y(C)
Q921	23314971	Transistor, 2SC5360(FA)
Q922	23114433	Transistor, 2SC1815-Y
Q962	23114735	Transistor, 2SA1020-Y(C)
Q973	23114735	Transistor, 2SA1020-Y(C)
R715	24366273	CF, 27k ohm
R725	24366222	CF, 2200 ohm
R742	24322229	MF, 2.2 ohm, 1W
R746	24366101	CF, 100 ohm
R748	24366101	CF, 100 ohm
R901	24366101	CF, 100 ohm
R903	24942102	CC, 1k ohm, 1/2W
R904	24366222	CF, 2200 ohm
R905	24366470	CF, 47 ohm
R906	24366331	CF, 330 ohm
R908	24366220	CF, 22 ohm
R909	24366330	CF, 33 ohm
R911	24366101	CF, 100 ohm
R913	24942102	CC, 1k ohm, 1/2W
R914	24366222	CF, 2200 ohm
R915	24366330	CF, 33 ohm
R916	24366331	CF, 330 ohm
R918	24366220	CF, 22 ohm
R919	24366270	CF, 27 ohm
R921	24366101	CF, 100 ohm
R923	24942102	CC, 1k ohm, 1/2W
R924	24366222	CF, 2200 ohm
R925	24366470	CF, 47 ohm
R926	24366331	CF, 330 ohm
R928	24366220	CF, 22 ohm
R929	24366330	CF, 33 ohm
R938	24366560	CF, 56 ohm
R943	24383153	OMF, 15k ohm, 2W
R945	24366560	CF, 56 ohm
R953	24383153	OMF, 15k ohm, 2W
R959	24366221	CF, 220 ohm
R961	24366152	CF, 1500 ohm
R962	24366102	CF, 1k ohm
R965	24366471	CF, 470 ohm
R987	24366470	CF, 47 ohm
R9501	24366470	CF, 47 ohm
R9607	24366470	CF, 47 ohm
⚠V901A	23903148	Socket, ISH-44S-E ICE #5
⚠V902A	23903148	Socket, ISH-44S-E ICE #5
⚠V903A	23903148	Socket, ISH-44S-E ICE #5
⚠V901R	23071868	Other Block, COUPLING R
⚠V902G	23071476	Other Block, COUPLING G
⚠V903B	23071400	Other Block, COUPLING B
W661	23351214	Speaker, 120X120 8 ohm 20W, SPK-1438AO
W662	23351214	Speaker, 120X120 8 ohm 20W, SPK-1438AO

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TOSHIBA

FILE NO. 020-200307

SERVICE MANUAL

COLOR TELEVISION

N3PSP Chassis

51H83, 57H83, 65H83

(TAC0352) *(TAC0351)* *(TAC0353)*

DOCUMENT CREATED IN JAPAN, June, 2005

TABLE OF CONTENTS

CHAPTER 1 **GENERAL ADJUSTMENTS**

SAFETY INSTRUCTIONS 3
CRT ASSEMBLY REPLACEMENT AND MOUNTING 4
PICTURE TUBE COMPONENTS ADJUSTMENT 6
REPLACEMENT OF THE CRT 9
SERVICE MODE 10
ELECTRICAL ADJUSTMENT 12
CONVERGENCE ADJUSTMENT 13
SCREEN AND MIRROR ALIGNMENTS 16
CIRCUIT CHECKS 17

CHAPTER 2 **SPECIFIC INFORMATIONS**

SETTING & ADJUSTING DATA 18
LOCATION OF CONTROLS 19
ADDING CHANNELS TO THE TV'S MEMORY 21
MECHANICAL DISASSEMBLY 23
CHASSIS REPLACEMENT PARTS LIST 27
PC BOARDS BOTTOM VIEW 47
TERMINAL VIEW OF TRANSISTORS 60
CIRCUIT BLOCK DIAGRAM 63
SPECIFICATIONS ..... END

APPENDIX:

CIRCUIT DIAGRAM

CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is (A) kV at zero beam current (minimum brightness) under a 120V AC power source. The high voltage must not, under any circumstances, exceed (B) kV.

   Refer to table-1 for high voltage (A), (B).
   (See SETTING & ADJUSTING DATA on page 18)

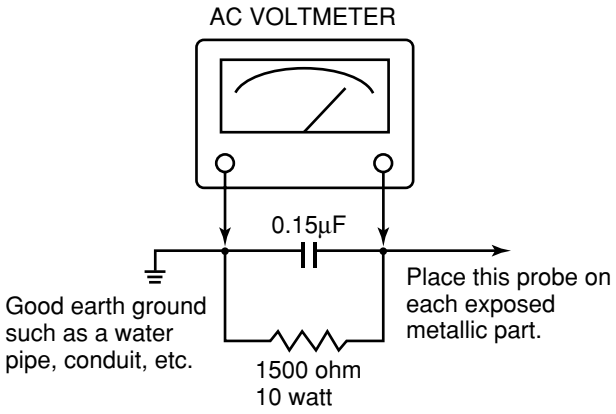
   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. This receiver is equipped with a Fail Safe (FS) circuit which prevents the receiver from producing an excessively high voltage even if the B+ voltage increases abnormally. Each time the receiver is serviced, the FS circuit must be checked to determine that the circuit is properly functioning, following the FS CIRCUIT CHECK procedure in this manual.
3. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING : Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation Transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.
4. Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screwheads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner:

   Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 μF, AC type capacitor, between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 μF capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.675 volts rms. This corresponds to 0.45 milliamp. AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

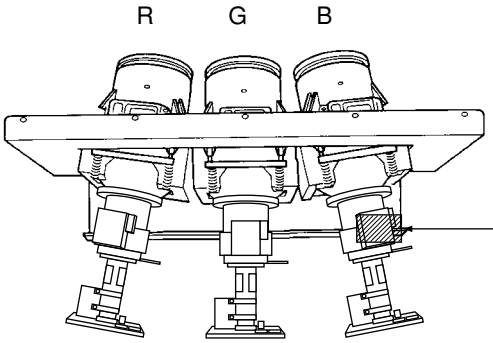

AC VOLTMETER
0.15μF
Good earth ground such as a water pipe, conduit, etc.
Place this probe on each exposed metallic part.
1500 ohm
10 watt

PRODUCT SAFETY NOTICE

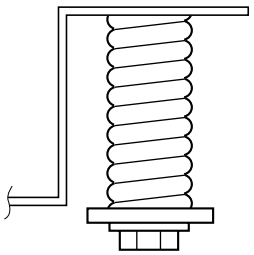
Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

CRT ASSEMBLY REPLACEMENT AND MOUNTING

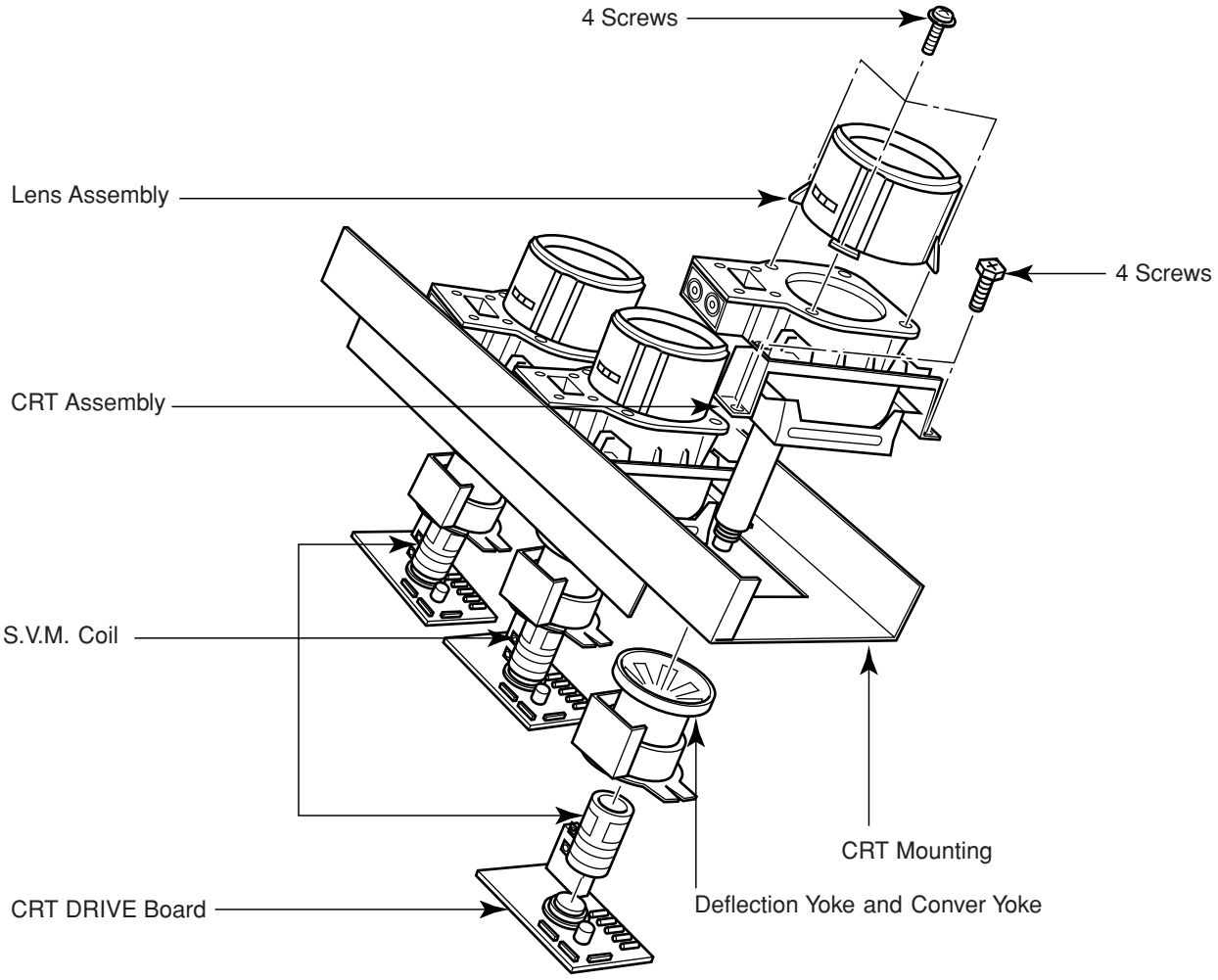
CAUTION : DO NOT LOOSEN THE HEX HEAD BOLTS WITH SPRINGS (12 PCS), BECAUSE THOSE ARE FOR SEALING OF CRT COOLANT.



Attention Serviceman



The Hex Head Bolts with Springs. (see sketch) used on CRT assembly, are NOT Adjustment Screws DO NOT LOOSEN-FLUID LEAKAGE WILL OCCUR.



Lens and Neck Components View

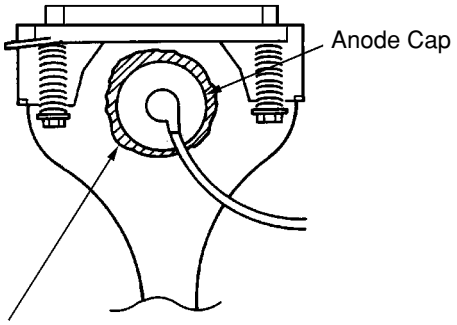
TO REMOVE CRT (Same procedure for R, G, B)

1. Remove CRT DRIVE Board, S. V. M. COIL and DEF. YOKE from CRT.
2. Remove Lens Assembly.
3. Detach CRT Anode Cap from CRT.
4. Remove CRT Assembly from CRT Mounting.

CRT REPLACEMENT (Same procedure for R, G, B)
Reverse the removal procedures except the followings.

1. Anode Cable should be replaced with new one. See “SERVICING PRECAUTIONS” shown below.
2. Install silicon (T461B) to the CRT, replace the Anode cable and put enough silicon again on around the Anode Cap as illustrated.

CAUTION: Align the Anode cable as illustrated on page 4.

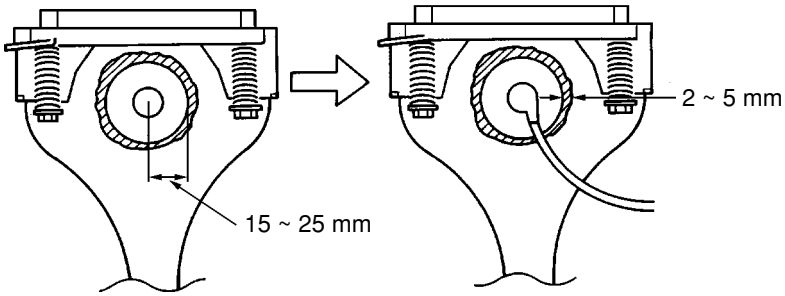


Silicon
(On shaded area)
TSE3843W #23960136

ADJUSTING PROCEDURE IN REPLACING CRT

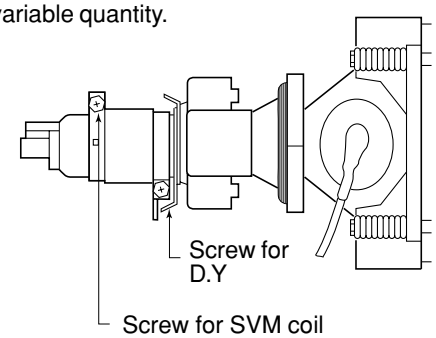
1. R.G.B. FOCUS ADJUSTMENT (page 7.)
2. PICTURE TILT ADJUSTMENT (page 7.)
3. USER CONVERGENCE CENTER CHECK (See owner's manual.)
4. CENTERING ADJUSTMENT (page 7.)
5. CONVERGENCE ADJUSTMENT (page 13.)
6. WHITE BALANCE ADJUSTMENT (page 12.)

Adjustments are complete.



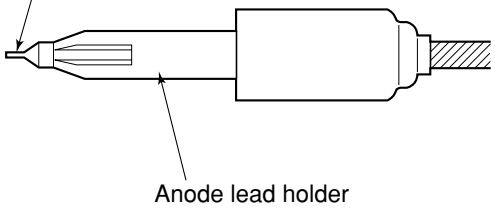
SERVICING PRECAUTIONS

■ Do not use a magnetized screw driver for screws of Deflection Yoke and Velocity Modulation Coil to avoid magnetization of electron gun. Magnetization of electron gun will degrade basic function and result in unbalance of right and left shift of user static convergence, and result in no variable quantity.



■ When replacing the anode cap assembly (CRT) or anode lead assembly (F.B.T.), remove the anode lead holder from old one and attach the holder again to new anode lead.

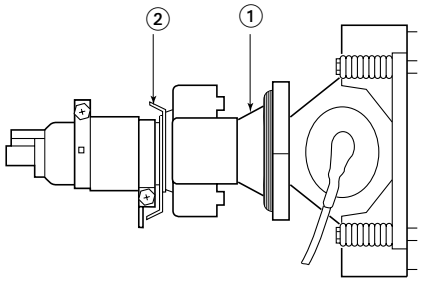
■ Check the point of anode lead in a straight line, if it is winding, please revise it.



WARNING : BEFORE SERVICING THIS CHASSIS, READ THE “X-RAY RADIATION PRECAUTION”, “SAFETY PRECAUTION” AND “PRODUCT SAFETY NOTICE” ON PAGE 3 OF THIS MANUAL.

PICTURE TUBE COMPONENTS ADJUSTMENT

DESCRIPTION OF NECK COMPONENTS



① Deflection yoke and convergence yoke
The position on the neck is required most front (CRT funnel side) and the screw is fastened after rotating yoke adjusting picture tilt.

② Centering magnet
After adjusting picture tilt, picture position is finally fixed by this magnet.
In order to get maximum margin of user convergence control for center of screen, this magnet have to be used for center convergence adjustment.

PREPARATION
Operate the receiver for at least 5 minutes.

R, G, B FOCUS ADJUSTMENT

1. Before adjusting the R, G, B FOCUS, remove the 4 screws of Lens Assembly which is fixed on the CRT Assembly. (See page 4.)
   Then turn around the Lens Assembly by 180˚ to adjust the fastening screw (Fig. a) and fasten the 4 screws to secure Lens Assembly.
2. Select the adjustment mode. (See page 10.)
3. Press “7” button to display the built-in cross-hatch.
4. Press “0” and “RTN” buttons to make the picture a single Red color.
   100 button ..... to erase Red color
   0 button ..... to erase Green color
   RTN button ..... to erase Blue color.
5. Loosen the fasten screw and adjust Red lens focus to best focusing point of picture center. Then fasten the screw. (See Fig. a.)

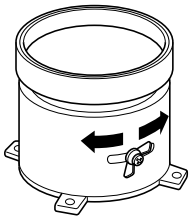


Fig. a

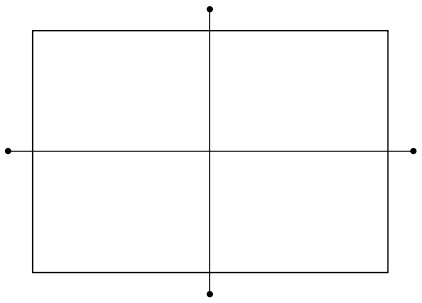
6. Adjust FOCUS VR “R” of FOCUS PACK to find best focusing point of picture center.
7. Repeat steps 3 to 5 for Green and Blue colors.

TILT ADJUSTMENT

Rotate R, G, B deflection yoke so that picture becomes horizon, then fasten screw.

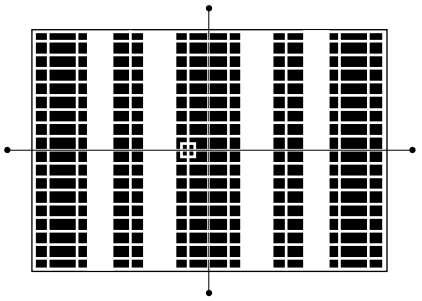
CENTERING ADJUSTMENT

1. Stretch a thread between two center of screen edge (top and bottom, left and right).



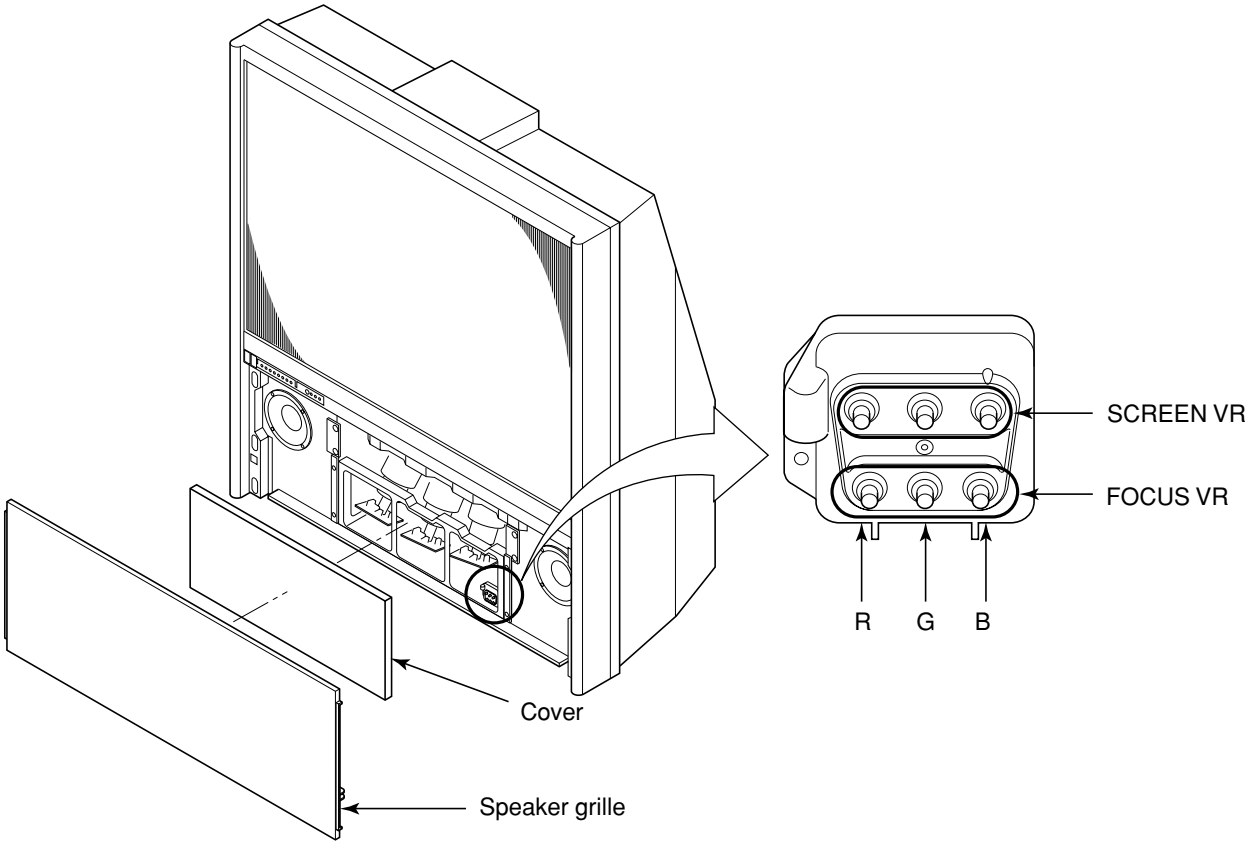
2. Receive NTSC.
   Then select SERVICE MODE. (See Page 10.)

3. Select CONVERGENCE ADJUSTING mode, and press "7" button to display the internal net pattern.
   Move Cursol and recognize horizontal line indicated Y:4. This line is vertical center. Push "9" button to display the vertical stripes, and recognaize horizontal center.

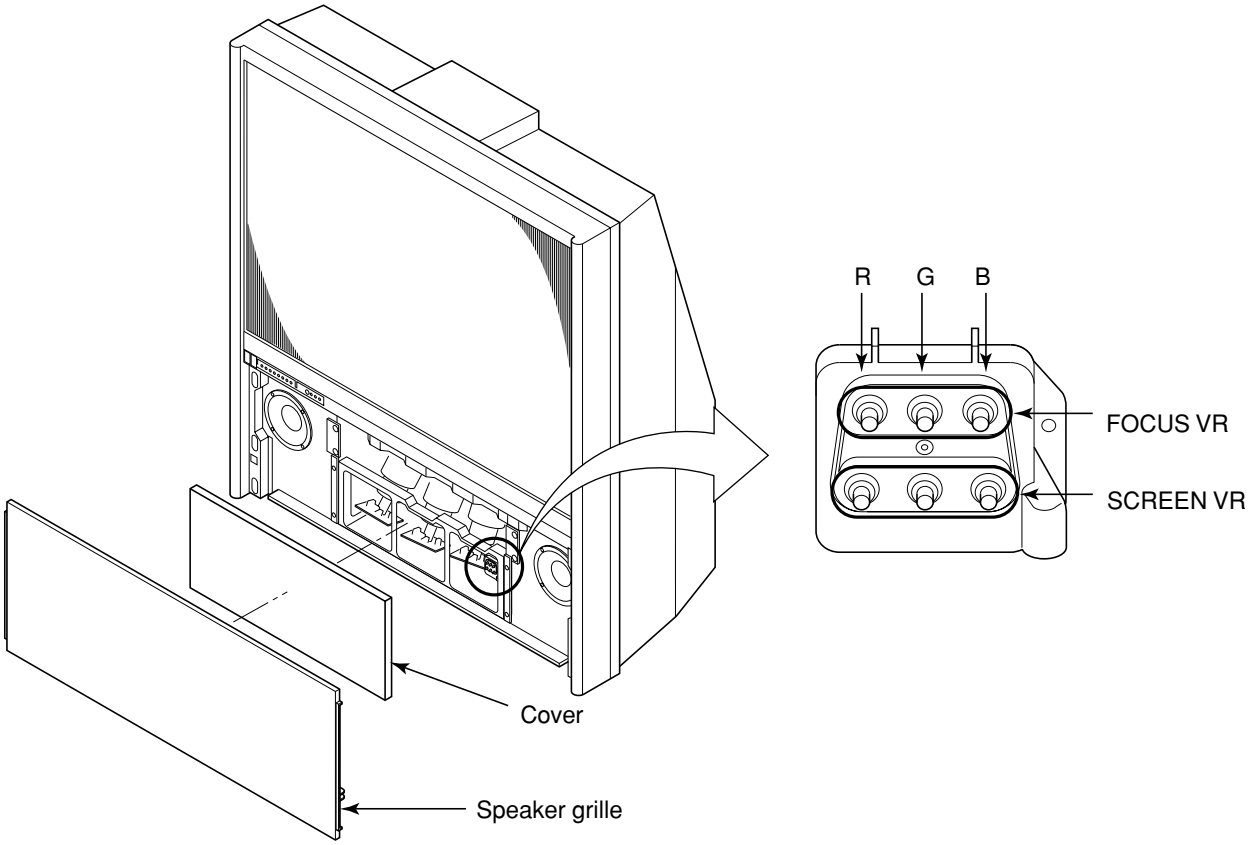


4. Perform VCEN adjustment. (See page 12.)
5. Adjust G centering magnet so that the cross-bar pattern center comes to screen center.
6. Perform HEIGHT adjustment . (See page 13.)
7. Perform VERT. LINEARITY adjustment.
8. Perform WIDTH adjustment. (See page 12.)
9. Check whole quality of green line.
10. Adjust R, B centering magnet so that the cross-bar pattern center comes to screen center.

LOCATION OF SCREEN AND FOCUS VR'S (57", 65")



LOCATION OF SCREEN AND FOCUS VR'S (46", 51")



REPLACEMENT OF THE CRT

Service parts are provided for each R, G and B.
The contents of the parts are as follows.

	R	G	B
HITACHI CRT	23008174	23008175	23008176

REPLACEMENT OF HIGH VOLTAGE CABLE

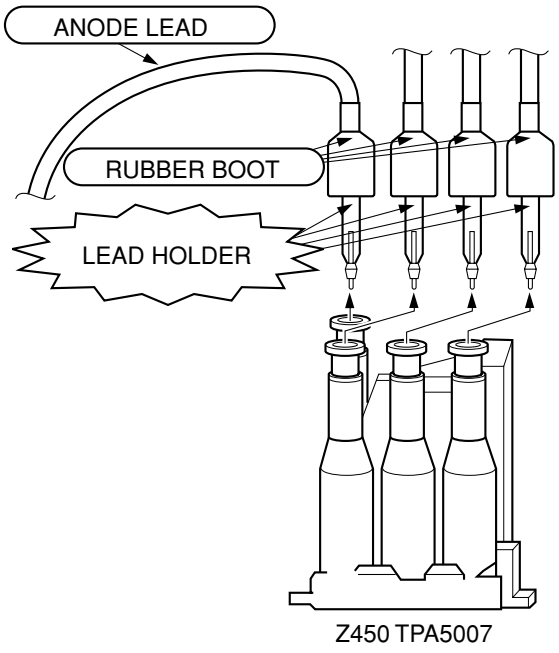


Fig. a

1. When replacing Anode Lead or Anode Cap with new one, remove Lead Holder from old lead as shown in figure below, and put it on new lead. Do not throw away Lead Holder.

NOTE : THE LEAD HOLDER IS ATTACHED TO TPA5007 (Z450), BUT IS NOT ATTACHED TO ANODE LEAD AND ANODE CAP. RUBBER BOOT IS ATTACHED TO ANODE LEAD AND ANODE CAP.

2. Detaching Lead Holder

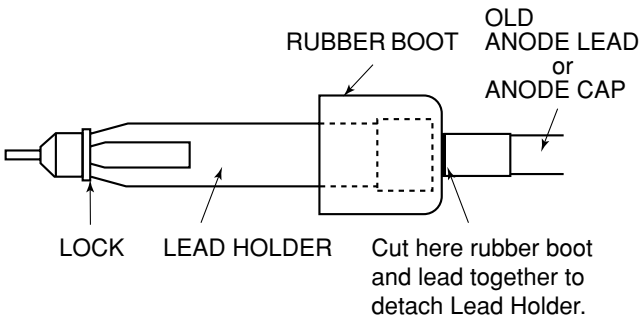


Fig. b

SERVICE MODE

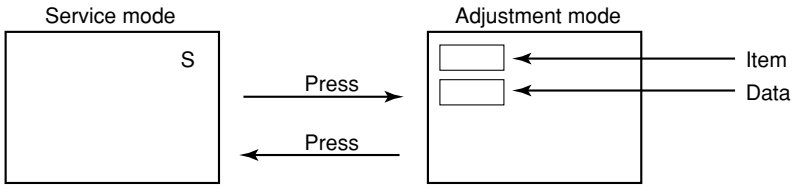
1. ENTERING TO SERVICE MODE

1) Press MUTE button twice on Remote Control.
2) Press MUTE button again to keep pressing.
3) While pressing the MUTE button, press MENU button on TV set.

(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

Screen adjustment mode ON/OFF:	TV (ANT)/VIDEO button (on TV)
Selection of the adjustment items :	Channel ▲/▼ (on TV or Remote)
Change of the data value :	Volume ▲/▼ (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory (QA02) :	RECALL+Channel button on TV (▲)
Initialization of the self diagnostic data:	RECALL+Channel button on TV (▼)

“RCUT” selection :	1 button
“GCUT” selection :	2 button
“BCUT” selection :	3 button
“SCNT” selection :	4 button
“SCOL” selection :	5 button
“TNTC” selection :	6 button
Convergence adj :	7 button
Self diagnostic display :	9 button

4. SELECTING THE ADJUSTING ITEMS

1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 18)

5. ADJUSTING THE DATA

1) Pressing of VOLUME ▲ or ▼ button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

6. EXIT FROM SERVICE MODE

1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA OF QA02

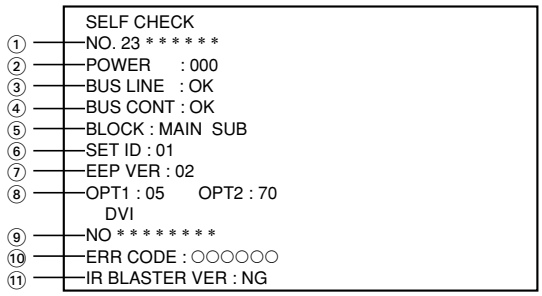
After replacing QA02, the following initialization is required.

1. Enter the service mode, then select any register item.
2. Press and hold the RECALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been complated.
3. Check the picture carefully. If necessary, adjust any adjustment item above. Perform “Programming Channel Memory” on the owner's manual.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.

7. SELF DIAGNOSTIC FUNCTION

1) Press “9” button on Remote Control during display of adjustment menu in the service mode. The diagnosis will begin to check if interface among IC’s are executed properly.
2) During diagnosis, the following displays are shown.


SELF CHECK
① NO. 23 * * * * * *
② POWER : 000
③ BUS LINE : OK
④ BUS CONT : OK
⑤ BLOCK : MAIN SUB
⑥ SET ID : 01
⑦ EEP VER : 02
⑧ OPT1 : 05 OPT2 : 70
DVI
⑨ NO * * * * * * * *
⑩ ERR CODE : ○○○○○○
⑪ IR BLASTER VER : NG

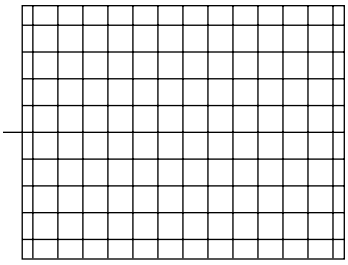
① Part number of microprocessor (QA01)
② Operation number of protection circuit (current limiter) . . . . “000” is normal.
③ BUS line check
- “OK” ..... Normal
- “SCL-GND” or “NG” ..... SCL-GND short circuit
- “SDA-GND” or “NG” ..... SDA-GND short circuit
- “SCL-SDA” or “NG” ..... SCL-SDA short circuit

④ BUS line ACK (acknowledge) check
- “OK” ..... Normal
- Display of Location Number . . . . NG
- (Display example)
- “QA02 NG”, “H001 NG”, “Q501 NG” etc.
- Note: The indication of failure place is only one place though failure places are plural. When repair of a failure place finishes, the next failure place is indicated. (The order of priority of indication is left side.)

⑤ Sync. signal check
- Green display ..... Normal
- Red display ..... NG
- MAIN ..... Main sync
- SUB ..... Sub sync (when turn on the PIP)

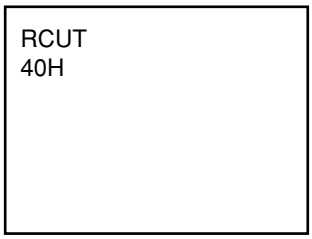
⑥ ID code for TV Set
⑦ Version of "EEP"
⑧ Data for "OPT"
⑨ Part number of DVI microprocessor (Q203)
⑩ DVI error code ..... "○○○○○○" is normal. (When DVI signal is received)
⑪ Version of IR braster IC ("NG" is displayed for models without TheaterLink.)

ELECTRICAL ADJUSTMENT

ITEM	ADJUSTMENT PROCEDURE
VERTICAL POSITION (VPSI)	1. Receive NTSC signal. 2. Connect he probe of digital voltmeter to TP-V and TP-G on SIGNAL Board. 3. Call up the adjustment mode display, then select the item VCEN. 4. Press the VOLUME ▲ or ▼ button to get the voltage 0±10 mV.
WIDTH (WID)	1. Receive NTSC signal. 2. Select the "FULL" mode by PIC SIZE button on Remote Control. 3. Call up the adjustment mode display, then select the item WID. 4. Press the VOLUME ▲ or ▼ button to get the picture so that left and right eddes of video signal begin to lack. 5. Press the VOLUME ▲ button to advance the data by 8 steps. NOTE: Check the horizontal picture position is correct.
SUB-BRIGHTNESS (BRTC)	1. Receive the air signal or aux Video signal. 2. Enter sports mode on user menu. 3. Enter the service mode, then select "**BRTC**" register. 4. Adjust the data to set dark area of picture to proper level.
HEIGHT (HIT)	1. Receive NTSC signal. 2. Select the "FULL" mode by PIC SIZE button on Remote Control. 3. Call up the adjustment mode display and select the item HIT. 4. Press the VOLUME ▲ or ▼ button to get the picture so that top and bottom of video signal begin to lack. 5. Press the VOLUME ▲ button to advance the data by 8 steps. Note: Check the vertical picture position is correct. Adjust the data of height after vertical linearty.
VERTICAL LINEARITY (VLIN) (FULL mode only)	1. Receive cross-hatch pattern. 2. Call up the adjustment mode display, then select the item **VLIN**. 3. Press the VOLUME ▲ or ▼ button to obtain the picture of the best linearity. 4. Then readjust the item HIT. 
WHITE BALANCE (RCUT) (GCUT) (BCUT) (RDRV) (BDRV)	1. Press RESET button on TV or remote hand set. 2. Call up the adjustment mode display, then adjust the data of items **RCUT**, **GCUT** and **BCUT** to "80". 3. Press TV (ANT)/VIDEO button on TV. 4. Gradually rotate R, G and B SCREEN volume of FOCUS PAC (page 9) clockwise or counterclockwise until the raster appears slightly on the CRT through the each lens, and leave them. (Look into the lens in order to check the raster.) 5. Press TV (ANT)/VIDEO button on TV again. 6. Exit from service mode. 7. Receive white laster pattern signal, and adjust the contrast to the minimum to make white picture to low light. 8. Adjust the data of items **RCUT**, **GCUT** and **BCUT** for low light area. 9. Adjust the contrast to the maximum to make white picture to high light. 10. Adjust the data of items **RDRV** and **BDRV** Controls for proper white-balanced picture in high light area. 11. Check the white balance in both low and high light areas. If necessary, perform again steps from 7 to 9.

CONVERGENCE ADJUSTMENT

1. Receive NTSC signal.
2. Enter to the service mode. (See Page 10.)



3. Press "7" button to enter the convergence adjusting mode, and the internal net pattern will be displayed. Then, press "9" button to display veritcal stripes.
4. Select the point and the color by pressing following buttons. (Cursor should be blinking.)
   "2", "8", "4", "6" : To select point
   "3" : To select color
5. Then press "5" button, and adjust the convergence by pressing following buttons. (Cursor should not be blingking.)
   "2", "8", "4", "6" : To adjust convergence
   "3" : To select color
6. Repeat from steps 3 to 4 until the convergence and the geometry become fine. (See Page 14.)
7. Press "7" button to momorize the adjusted data.
8. Message of "PLEASE PUSH TOUCH FOCUS" will be displayed, and press TOUCH FOCUS button which is located on the front panel.
9. TOUCH FOCUS CALIBRATION will start.
10. Soon message of "CALIBRATION FINISHED" will be displayed, and then a normal picture will be displayed.
11. Then push TOUCH FOCUS button again, and confirm that the convergence does not change.

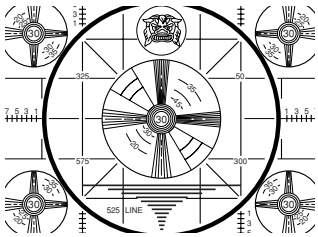
Note: If message of "TOUCH FOCUS ERROR" is displayed,
1) Check the connection between four sensors and Convergence Unit.
2) Check the geometry of internal net pattern. (See Page 14.)

If any problem cannnot be found, hardware might have problem.

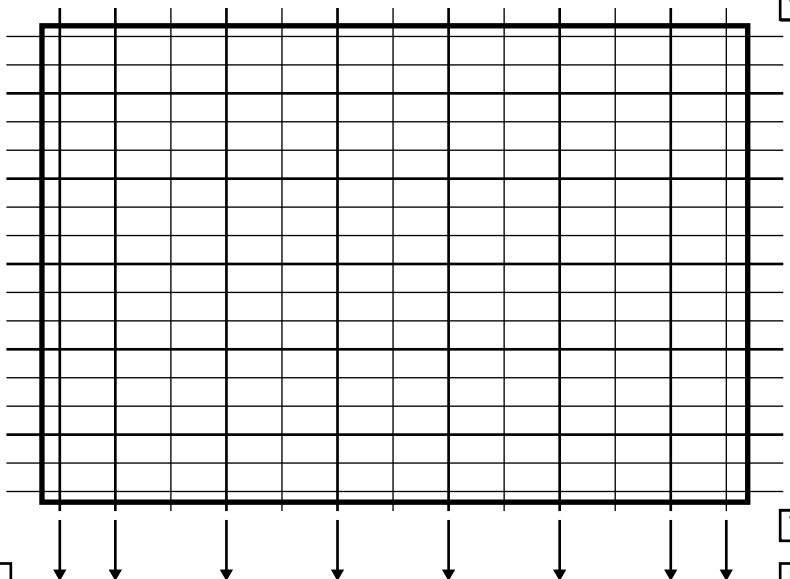
EXPLANATION OF KEY-FUNCTION IN THE CONVERGENCE ADJUSTMENT MODE

Load BACK UP DATA:	1 button
Up :	2 button
Selet Green color:	3 button
Left :	4 button
Blinking of cursor ON/OFF:	5 button
Right:	6 button
Adjust mode ON/OFF:	7 button
Down:	8 button
Vertical stripe ON/OFF	9 button
Erase Green line:	0 button
Erase Red line:	100 button
Erase Blue line:	ENT button

DEFLECTION and CONVERGENCE

ITEM	NAME	SETTING	INPUT SIGNAL	TEST POINT	MEASUREMENT INSTRUMENT	ADJUSTMENT METHOD	ADJUSTMENT SPEC
VPS1	VERTICAL Raster centering Adjusment	CONTRAST:MAX BRIGHNESS:CNT COLOUR :CNT TINT :CNT	Retma Signal	Between TP-G to TP-V	Digital Volt Meter	To adjust the voltage between TP-G and TP-V	0 ± 10mV
Centering Adjusment		CONTRAST:MAX BRIGHNESS:CNT COLOUR :CNT TINT :CNT PIC SIZE :FULL	Retma Signal	Picture Adjustment	Picture Adjustment	1. To adjust the Magnet about Horizntal position and Vertical position should center of picture. 2. To adjust each R, G, B.	
WID	Horizontal Adjustment (FULL)	CONTRAST:MAX BRIGHNESS:CNT COLOUR :CNT TINT :CNT PIC SIZE :FULL	Retma Signal	Picture Adjustment	Picture Adjustment	To adjust the Horizontal Amplitude by WID.	11 ± 1 bar
HIT VLIN	Vertical Adjustment (FULL)	CONTRAST:MAX BRIGHNESS:CNT COLOUR :CNT TINT :CNT PIC SIZE :FULL	Retma Signal	Picture Adjustment	Picture Adjustment		Upper ..... Circle of Lion just touch to line of Mask. Bottom .... To hide the 12 bars by line of Mask.
Convergence			Retma Signal	Picture Adjustment	Picture Adjustment	Refer to the following (Convergence Net Geometry)	

CONVERGENCE (51 / 57 / 65 WIDE)



Model	51WIDE	57WIDE	65WIDE
V size	635.085	780.750	810.000
	308.0	344.0	392.8
	231.0	258.0	294.6
	115.5	129.0	147.3
	0.0	0.0	0.0
	115.5	129.0	147.3
	231.0	258.0	294.6
	308.0	344.0	392.8
V span	38.5	43.0	49.1

Model	H size									H span
51WIDE	1129.0	549.7	458.1	274.9	91.6	0.0	91.6	274.9	458.1	549.7	91.6
57WIDE	1260.0	613.5	511.3	306.8	102.3	0.0	102.3	306.8	511.3	613.5	102.3
65WIDE	1442.0	702.1	585.1	351.1	117.0	0.0	117.0	351.1	585.1	702.1	117.0

UNIT: mm

NOTES

In many cases, color misconvergence may be corrected by returning HIT and WID data in main deflection side to initial adjusting values. Following cases will surely require readjustment of convergence.

CRT REPLACEMENT

When CRT is replaced, main deflection readjustment and color matching are required.
Perform following procedures.

1. Replace two CRT's of blue and red.
2. Perform horizontal adjustment for blue and red yokes on base of green CRT data. Mount yoke and velocity mod. coil alignment, pushing towards CRT without gap.
3. Adjust alignment of blue and red. (Refer Alignment adjustment for details.)
4. Rotating centering magnet, adjust CRT centers of red and blue to CRT center of green.
   (Picture position adjustment)
5. Adjust HIT and WID data of main deflection, and decide data at the most precise screen comparing to green data.
6. Adjust convergence of screen picture for color matching. Do not move green one at this time.
7. After convergence adjustment of screen picture finishes, replace green CRT.
   For green CRT as well, repeat steps 2 to 5 above on bases of red and blue color matching to adjust convergence.
8. Execute TOUCH FOCUS following instructions displayed on the screen after finishing convergence adjustments of all the colors.
   Note: Press button "7" again after "PLEASE PUSH TOUCH FOCUS" has been displayed. Then, TOUCH FOCUS will not be executed, and the current state of convergence will be displayed.

REPLACING CONVERGENCE UNIT

1. Confirm that the initial data, which is specified by a model name, is memorized in the new unit.
   (It's not allowed to use the data of other models.)
2. Mount the new unit to the SET, and turn the POWER on.
3. Adjust centering magnets, Hight (HIT) and Width (WID). (See Page 7.)
4. Adjust the convergence. (See Page 13.)

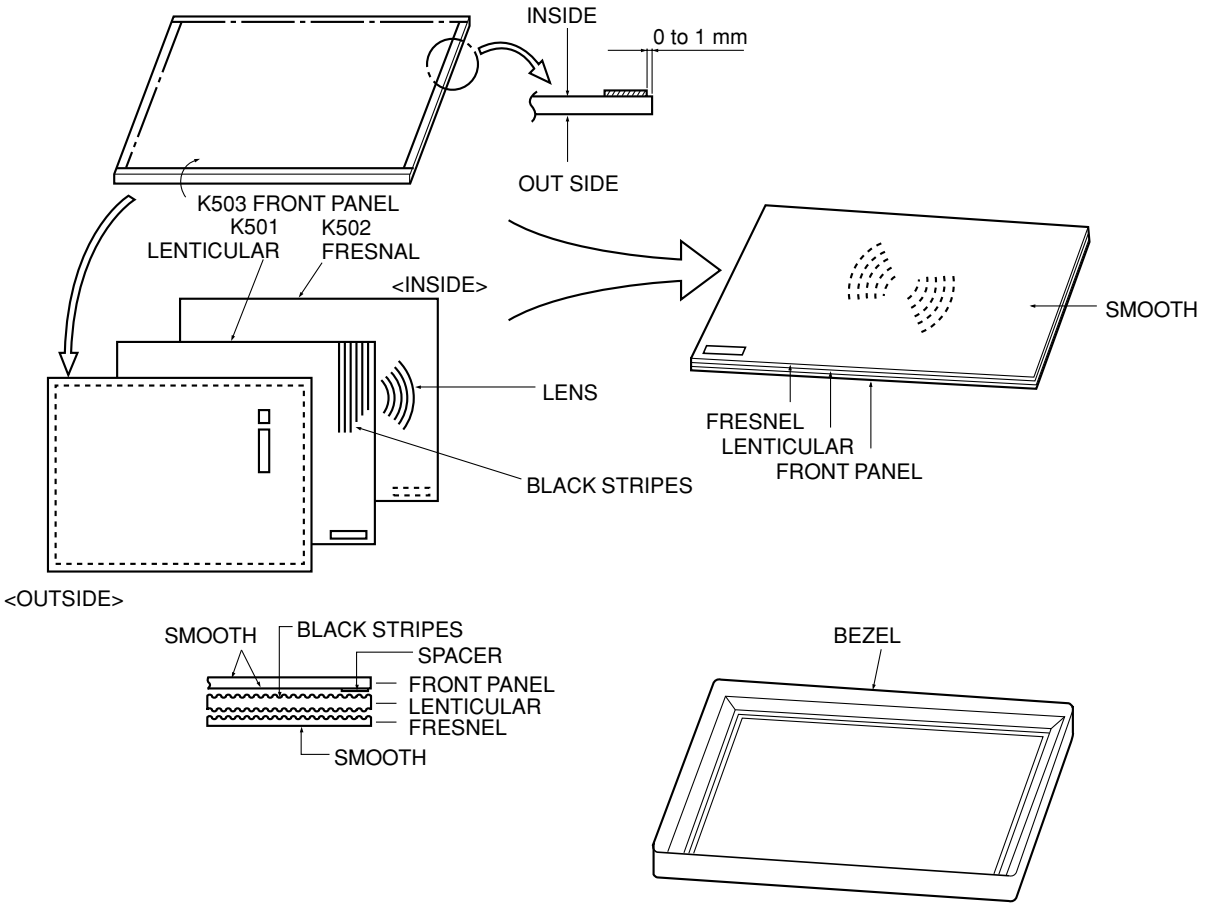
If the memory in the defective module is available, following steps are allowed.

1. Remove the memory (Q173) from the defective unit, and mount it to the new unit.
2. Mount the new unit to the SET, and turn the POWER on.
3. Enter to the convergence adjusting mode, and load BACKUP DATA by pressing "1" button. (See Page 13.)
4. Adjust centering magnets. (See Page 7.)
5. Adjust the convergence. (SeePage 13.)

SCREEN AND MIRROR ALIGNMENTS

ASSEMBLING OF FRONT SCREEN

MOUNTING OF FRONT SCREEN



CAUTION : Do not hold the optical system parts (lens and mirror) with bare hand to avoid finger-prints on the surface of those parts.

HOW TO CLEAN LENS AND MIRROR

1. Be sure to remove sand dust with an air brush, etc.
2. When it is stained slightly, breathe upon it and wipe away with the specified cleaning cloth.
   For other stains than the above, wipe the stains away with the specified cloth into which a cleaning liquid has been soaked.

Cleaning liquid..... **LENS LUSTER** (Manufactured by Edmund Scientific Co.), etc.

HOW TO CLEAN SCREEN

When cleaning the screen, use a soft cloth so as not to damage the screen.

1. Wipe the screen with a dry cloth to remove moisture on the screen.

Note : Absolutely do not use detergent, water, alcohol, benzine, thinner, etc. for cleaning in order not to wipe away the black print on the surface.

CIRCUIT CHECKS

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST to minimum (zero beam current).
3. High voltage must be measured below (B) kV.
   Refer to table-1 for high voltage (B).
   (See SETTING & ADJUSTING DATA on page 18)
4. Vary the BRIGHTNESS to both extremes to be sure the high voltage does not exceed the limit under any conditions.

CAUTION:
When the following parts fail, check the High Voltage after replacing.

Location No.	Name	Descriptions 51", 57", 65"
T461	Flyback	TFB3092AD
C440	Capacitor	1000pF, ±3%
C443	Capacitor	5100pF, ±3%
C444	Capacitor	3300pF, ±3%
C467	Capacitor	6800pF, ±5%
C468	Capacitor	6800pF, ±5%

ANODE VOLTAGE MEASURING METHOD

CAUTION: Take extra precaution when measuring this high voltage. High voltages are also present in surrounding circuit boards (CRT DRIVE assembly, DEFLECTION assembly, and POWER SUPPLY assembly).

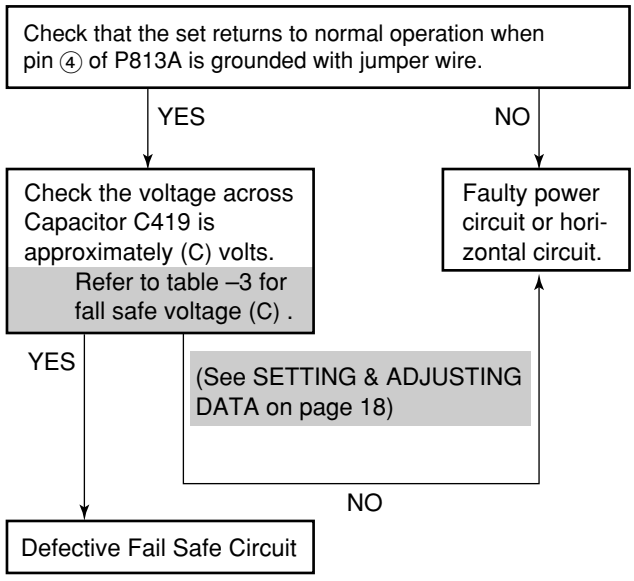
1. Disconnect the FBT anode cable as outlined below. Measure high voltage at the point where the cable enters the FBT.
2. Holding the rubber cover firmly, turn it counterclockwise and check that the lock has been disengaged. (See Fig. b on page 9.)
3. Determine the extent of the rubber cover before disconnecting the cable.
4. Pull straight up the anode cable to disconnect.
5. When reconnecting the cable, proceed in the reverse order. After reconnecting, tug on the cable to check that it is secure.

FS CIRCUIT CHECK

The Fail Safe (FS) circuit check is indispensable for the final check in servicing. Checking should be done following the steps below.

1. Turn the receiver on.
2. Temporarily short TP- (R) and TP- (X) on the DEF/CONVER Board with a jumper wire.
   Raster and sound will disappear.
3. The receiver must remain in this state even after removing the jumper wire. This is the evidence that the FS circuit is functioning properly.
4. To obtain a picture again, temporarily turn the receiver off and allow the FS circuit more than 5 seconds to reset. Then turn the receiver on to produce a normal picture.

Troubleshooting Guide for Fail Safe Circuit


Check that the set returns to normal operation when pin ④ of P813A is grounded with jumper wire.
YES
NO
Check the voltage across Capacitor C419 is approximately (C) volts.
Refer to table –3 for fall safe voltage (C) .
(See SETTING & ADJUSTING DATA on page 18)
Faulty power circuit or horizontal circuit.
YES
NO
Defective Fail Safe Circuit

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA

【 SAFETY INSTRUCTIONS 】

		51", 57", 65"
HIGH VOLTAGE AT ZERO BEAM:	(A)	31.0 kV
MAX HIGH VOLTAGE:	(B)	32.5 kV

Table-1

【 SERVICE MODE 】

ADJUSTING ITEMS AND DATA IN THE SERVICE MODE:

Item	Name of adjustment	Preset	Data
RCUT	R CUT OFF	80H	←
BCUT	B CUT OFF	80H	←
GDRV	G DRIVE	40H	←
BDRV	B DRIVE	40H	←
BRTC	BRIGHT CENTER	80H	←
HIT	PICTURE HIT	32H	←
VLIN	V LINEARITY	13H	←
VSC	V S CORRECTION	29H	←
WID	PICTURE WIDTH	32H	←

Item	Name of adjustment	Preset	Data
COLC	COLOR CENTER	52H	←
VCP	V COMPENSATION	04H	←
PARA	EW PARABOLA	11H	←
CNR	EW M CORRECTION	10H	←
HCP	H COMPENSATION	00H	←
VFC	V f CORRECTION	00H	←
VPSI	V CENTERRING	4DH	←
TVOP	TV OPTION	58H	←

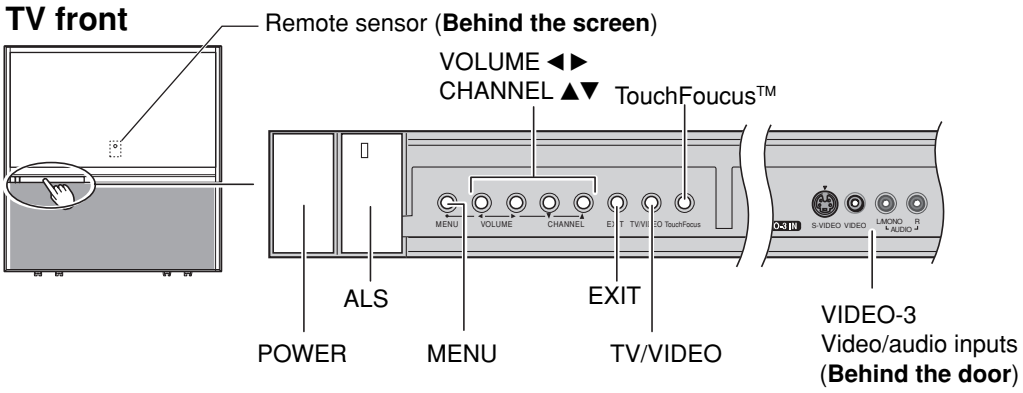
Table-2

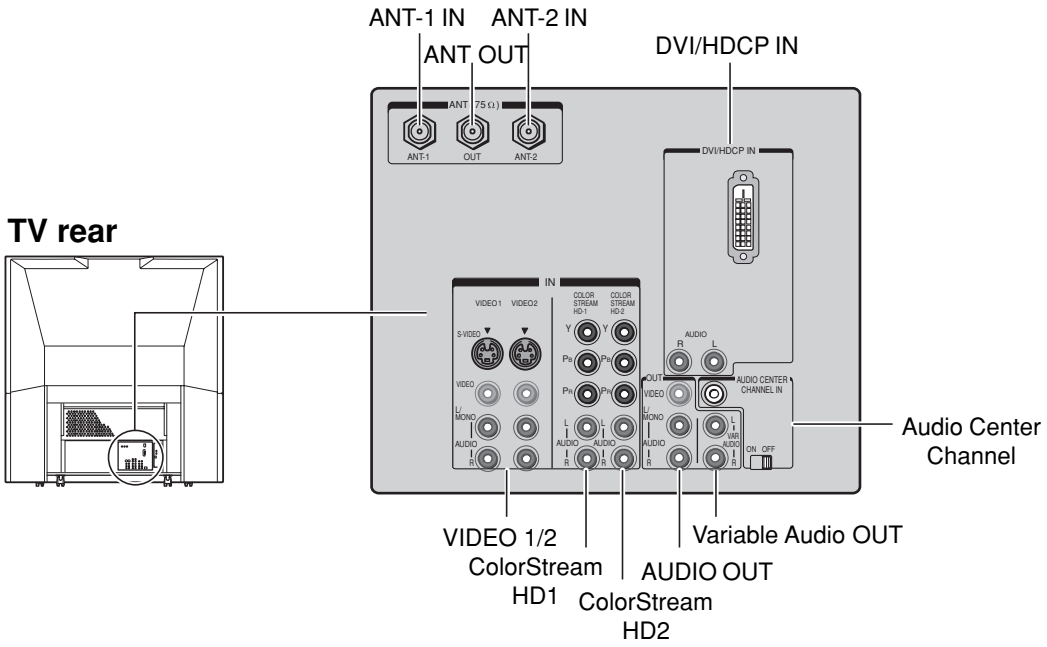
【 CIRCUIT CHECKS 】

HIGH VOLTAGE DET	(C)	8.7 V

Table-3

LOCATION OF CONTROLS (Representative: 51H83)





Remote control

POWER turns the TV on and off

RECALL displays screen information

SLEEP sets the TV to turn off at a specific time

TV/VIDEO selects video input source

MUTE mutes the sound

Device Switch switches between TV, CLB/SAT/VCR and DVD
sets to "TV " to control the TV.

CH (channel) ▲▼ cycles through programmed channels

Channel Numbers (0-9,100) allow direct access to channels

VOL (volume) ▲▼ adjusts the volume level

CH RTN returns to the memorized channel

MENU allows access to on-screen programming menus

ENTER sets programmed menu information

▲▼◄► select or adjust programming menus

POP CH ▲▼ selects the POP (picture-out-picture) channel

FAV ▼▲ cycles through favorite channels

FAVORITE allows access to the favorite channel search function

PIC SIZE cycles through the five picture sizes: Normal, Theater Wide 1,2,3,and Full

EXIT exits programming menus

SPLIT turns the POP feature on and off

SOURCE selects the POP picture source

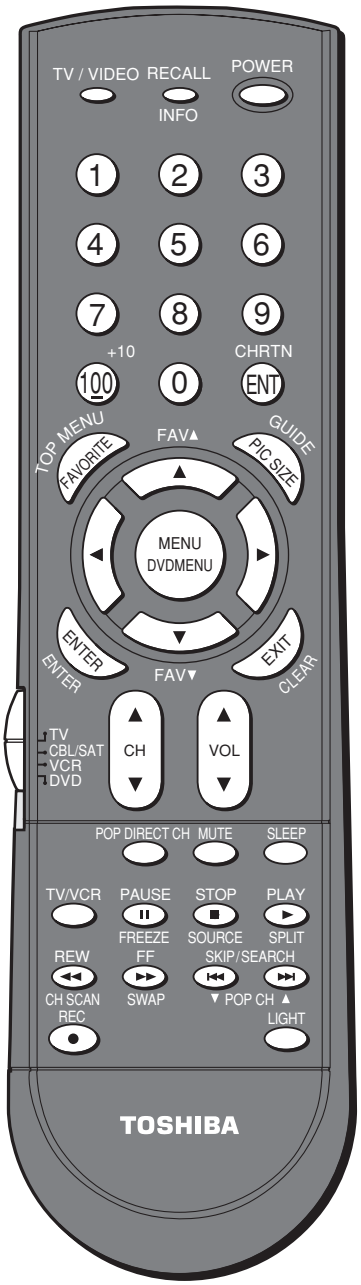
FREEZE freezes the POP picture

SWAP switches the main and POP pictures

POP DIRECT CH allows direct access to POP channels

CH SCAN allows access to the programmed channel search function

LIGHT illuminates the keypad for five seconds



Note:
The error message "Not Available " will appear if you press a key for a function that is not available.

ADDING CHANNELS TO THE TV'S MEMORY

When you press Channel ▲ or ▼, your TV will stop only on the channels stored in the TV 's channel memory. Follow the steps below to program all active channels into the TV 's memory.

Programming channels automatically

Your TV can automatically detect all active channels in your area and store them in its memory.After the channels are stored automatically, you can manually add or erase individual channels.
To program channels automatically:

1. Press MENU, and then press ◄ or ► until the SET UP menu appears.
2. Press ▲ or ▼ until the TV/CABLE is highlighted.
3. Press ◄ or ► to highlight either TV or CABLE, depending on which you use. If you use an antenna, highlight TV; if you use cable, highlight CABLE.
4. Press ▼ to select CH PROGRAM.
5. Press ◄ or ► to start channel programming.The TV will automatically cycle through all the TV or Cable channels (depending on which you selected),and store all active channels in the channel memory.
   While the TV is cycling through the channels,the message "Programming Now —Please Wait " appears.
6. When channel programming is complete,the message "Completed " appears.
7. Press Channel ▲ or ▼ to view the programmed channels.

Adding and erasing channels manually

After you have programmed the channels automatically, you can manually add or erase specific channels.
To add or erase channels:

1. Select the channel you want to add or erase.If you are adding a channel,you must select the channel using the Channel Number buttons.
2. Press MENU,and then press ◄ or ► until the SET UP menu appears.
3. Press ▲ or ▼ to highlight ADD/ERASE.
4. Press ◄ or ► to select ADD or ERASE, depending on the function you want to perform.
5. Repeat steps 1-4 for other channels you want to add or erase.

Note:
To tune TV to a channel not pargrammed in the channel memory, you must use the Channel Number buttons on the remote control.

* Please refer to owner's manual in detail.

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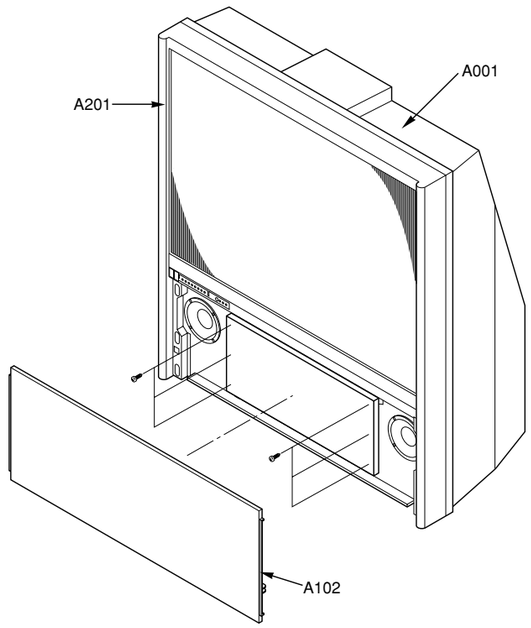
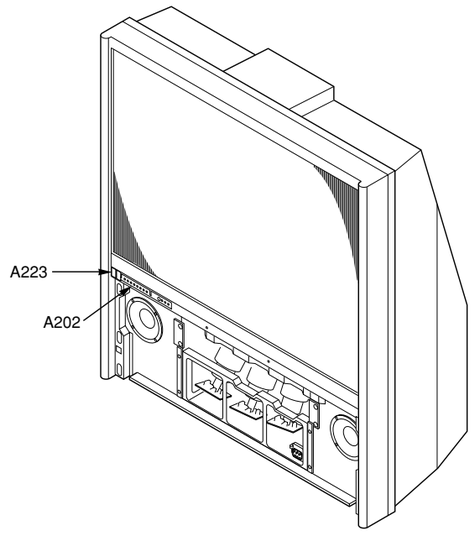
MECHANICAL DISASSEMBLY

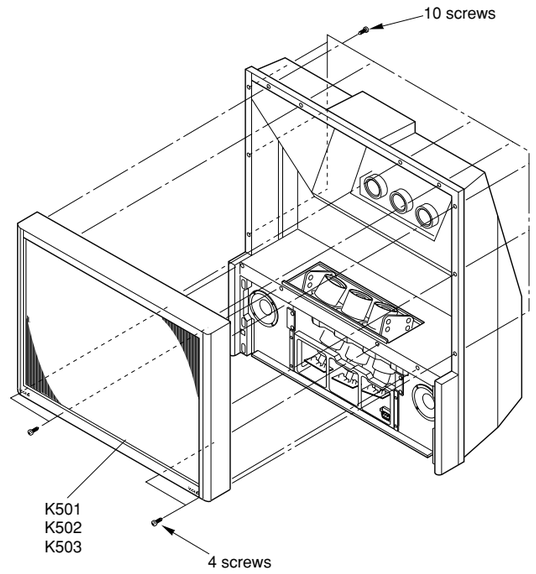
1 Speaker Grille Removal



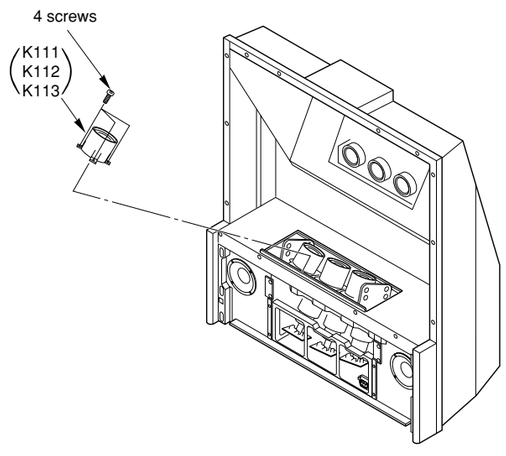
2 Control Panel Removal



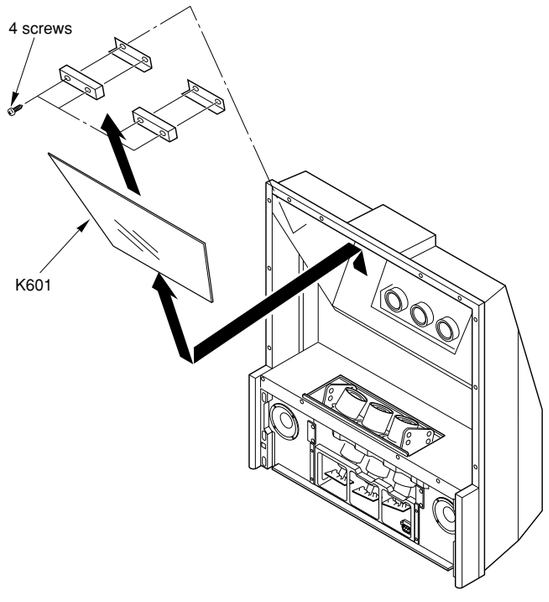
3 Front Mask Removal



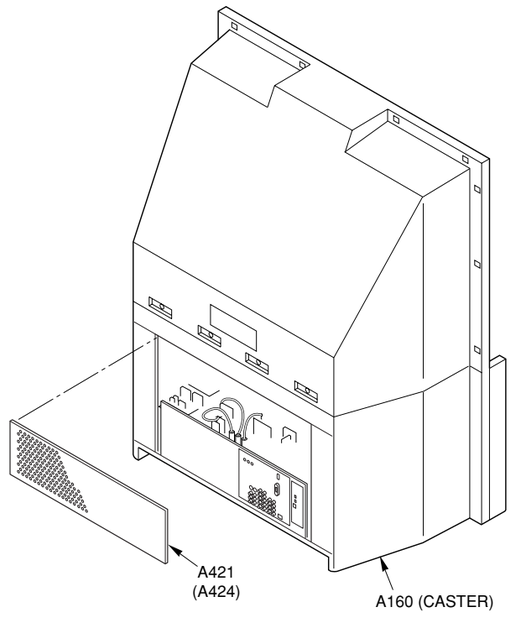
4 Shield Plate, Lens Removal



5 Mirror Removal



6 Back Board Removal



DISASSEMBLY INSTRUCTIONS

Disassembly for the N3PSP is a 15-step procedure designed to provide the preferred method to remove the light box in this chassis family. The unit used for an example in this procedure is the 51-inch 51H83. This method applies to this and 46-inch version of the same chassis. Using this method, **one person** is able to disassemble the unit and remove the light box without assistance.

1. Remove the speaker grille first. Apply outward pressure to the grille at the left top *(Figure 1a).* This will allow the mounting clamp to release. Move to the center, then the right side of the grille and repeat the process. After the three clamps at the top of the speaker grille are disengaged and the top is loose, release two more clamps at the bottom right and left sides and remove the grille.

Figure 1a

Next remove the back cover by removing 4 screws at the bottom *(Figure 1b).*

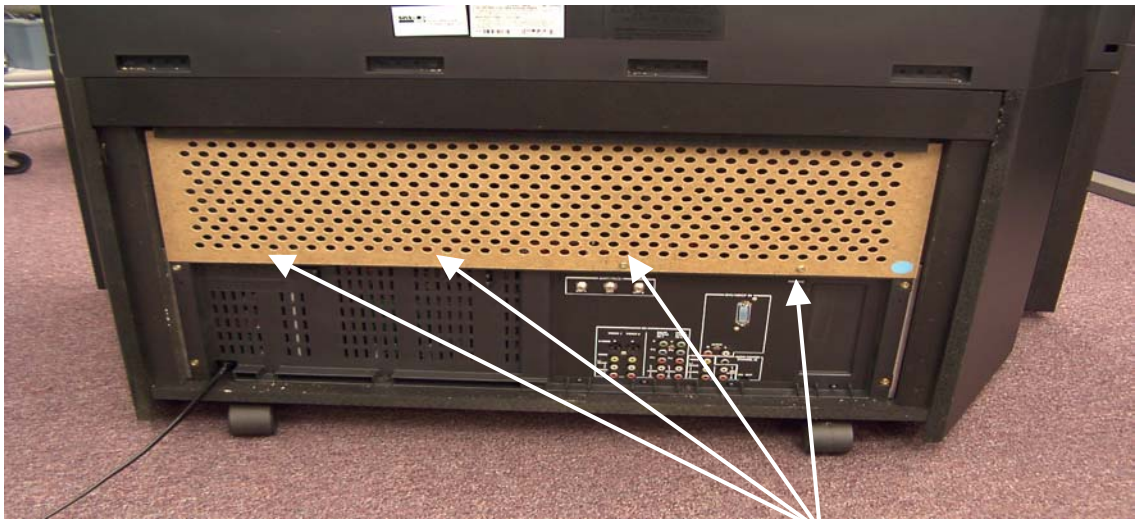


Figure 1b

2. Now remove the front cover located at the bottom between the speakers. To do this, remove 3 screws securing it to the bezel at the top and 3 on each side (*Figure 2).* After removing the screws pull the cover out at the bottom, then straight down.

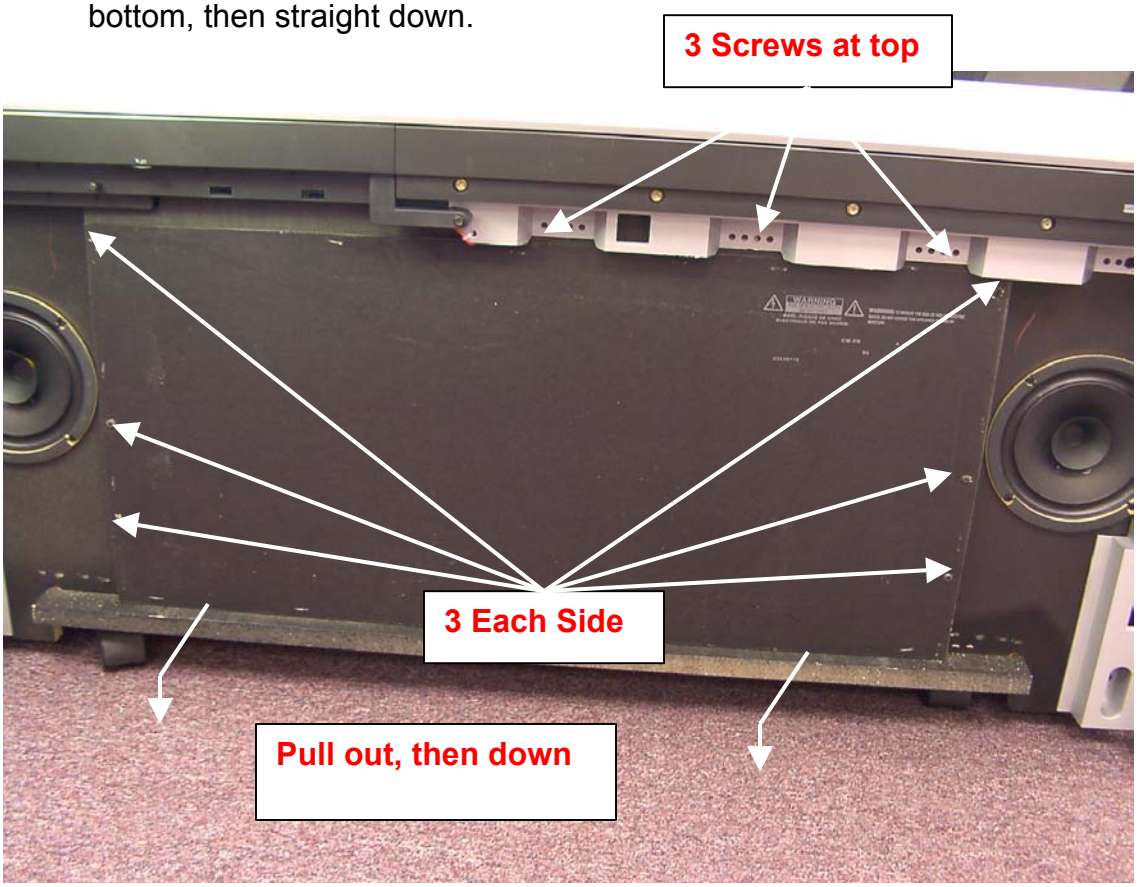


Figure 2

3. Disconnect the touch focus sensors by unplugging inline connector identified by the red wiring harness *(Figure 3).*

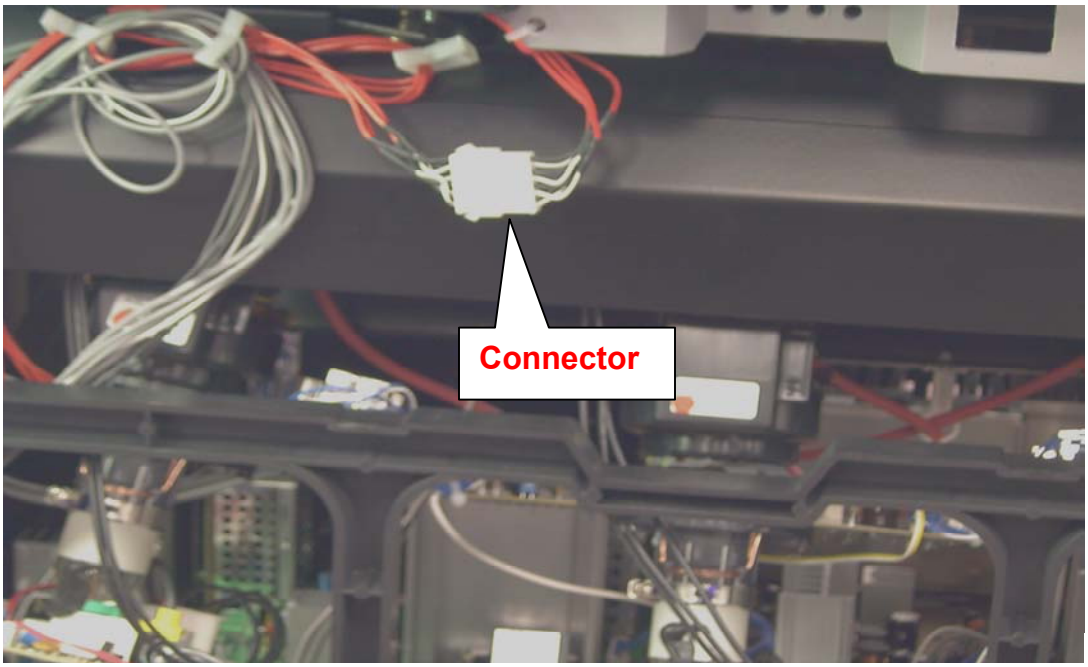


Figure 3

4. Remove 5 screws holding the decorative trim attached to the bottom of the screen and set it aside *(Figure 4).*

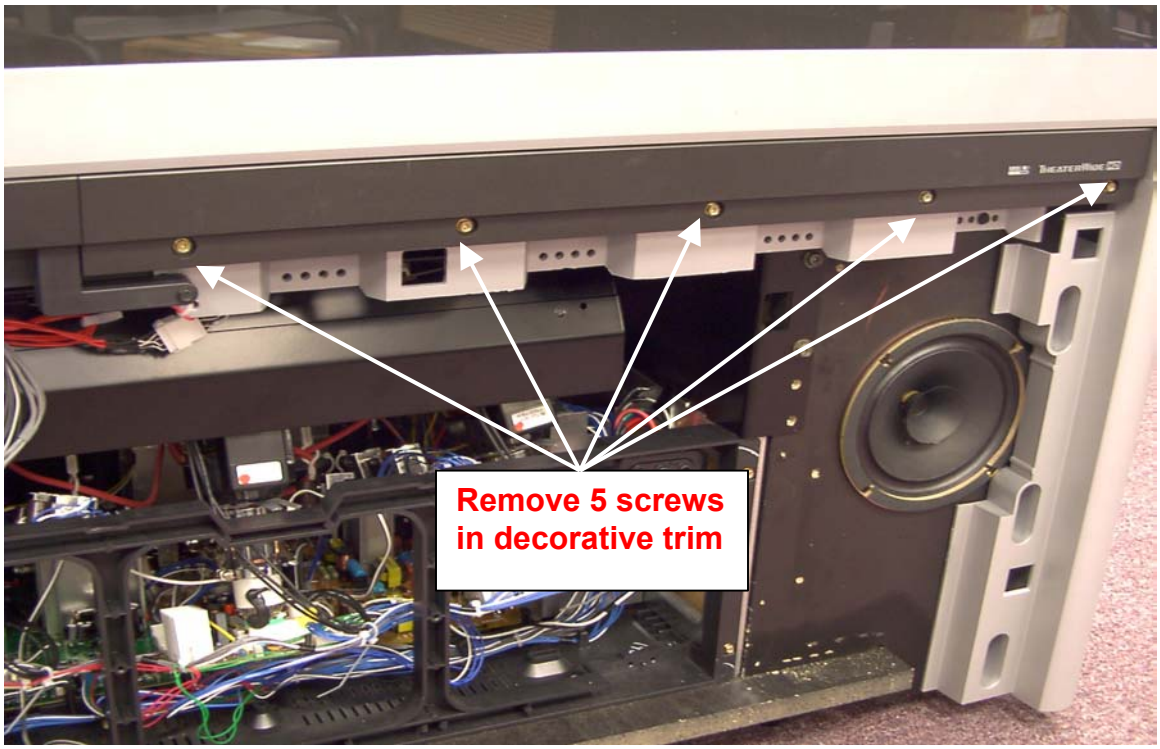


Figure 4

5. Remove 8 of the 10 screws holding the bezel in the rear of the upper cabinet. **Leave both, top inside screws in place at this time** *(Figure 5).*

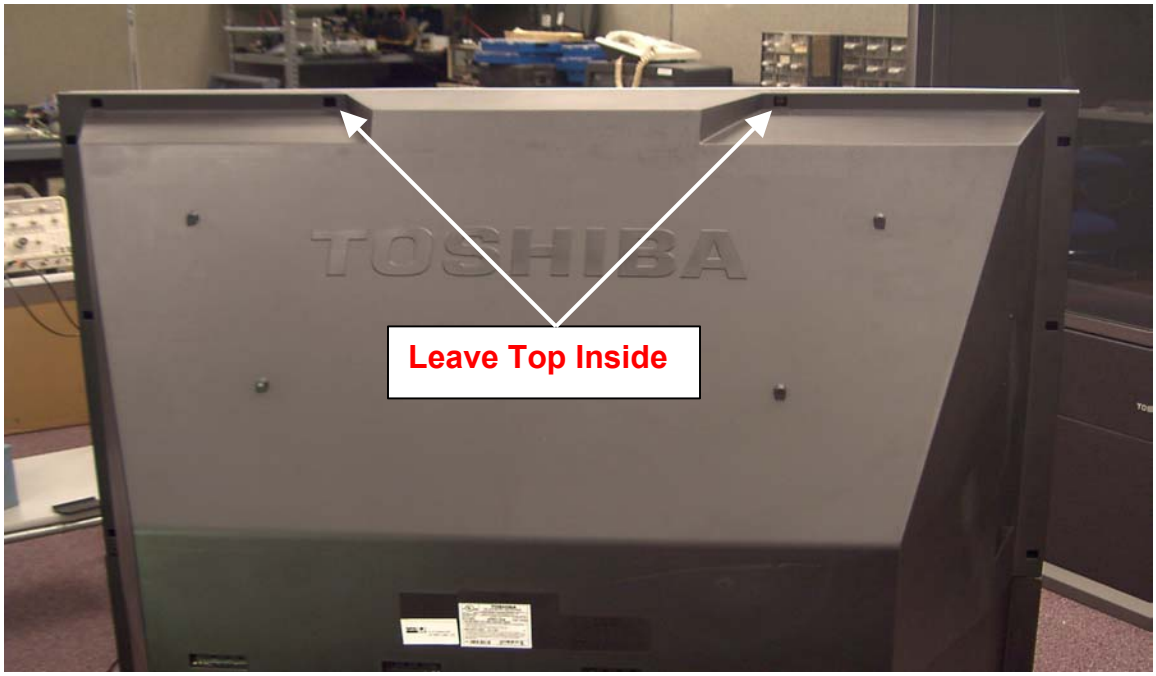


Figure 5

6. Remove the 3 screws holding the vertical trim at the bottom left side under the screen. Remove the trim and set it aside. This will be remounted and used for support later in the disassembly process. *(Figure 6)*

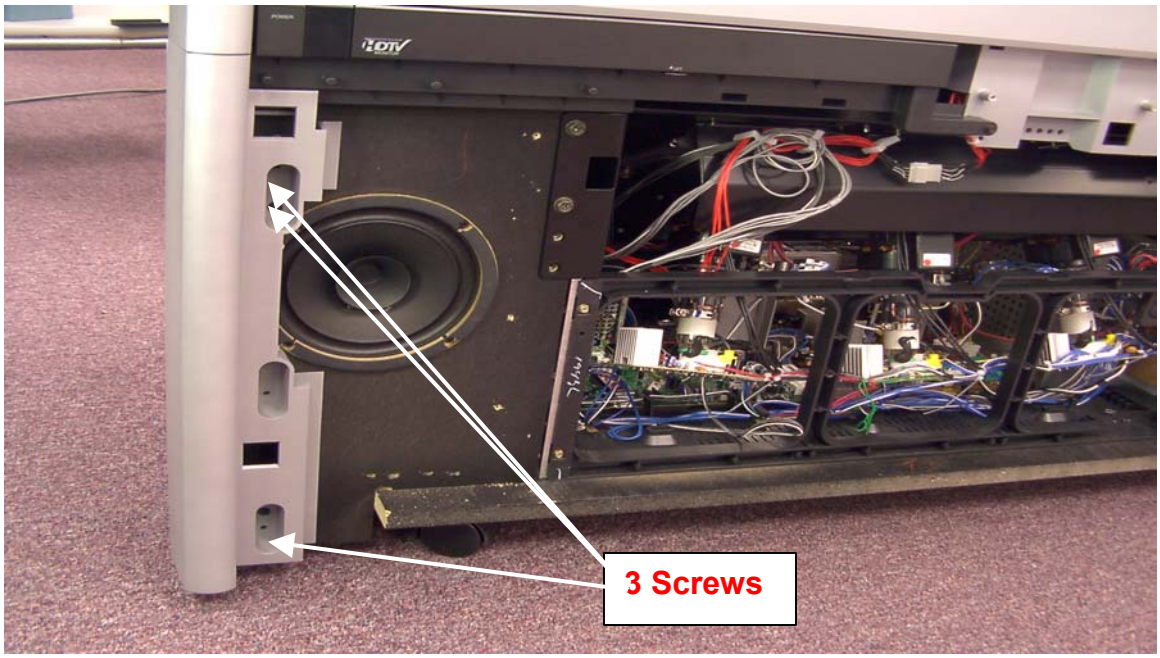


Figure 6

7. Now remove 2 screws holding the control panel and bottom side of the screen bezel on the left bottom side. Next, remove the 2 remaining screws holding the right side of the control panel. Remove both plugs and place the panel in a safe location *(Figure 7).*

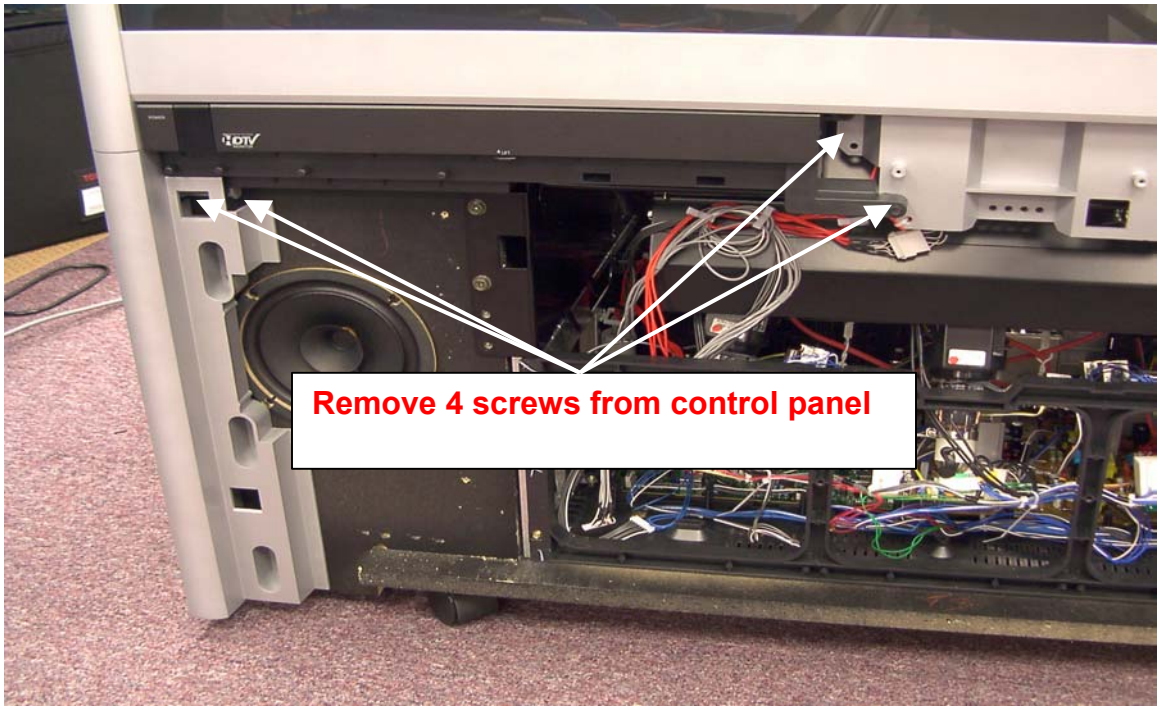


Figure 7

8. Remove 1 screw at the bottom right of the bezel *(Figure 8).*

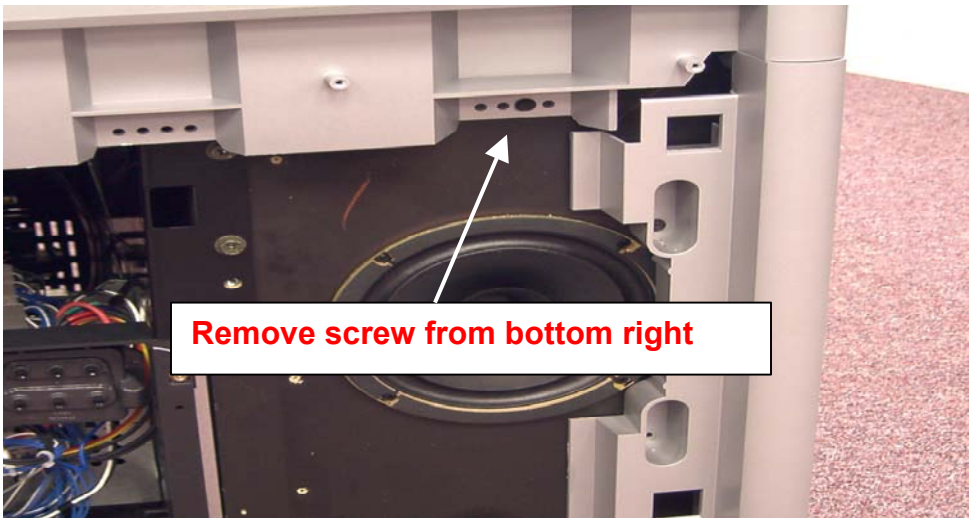


Figure 8

9. Using one screw at the top of the trim, **loosely** remount the vertical trim piece removed earlier in step 6 at the bottom left side of the bezel. This helps to secure the screen as it is removed *(Figure 9).*

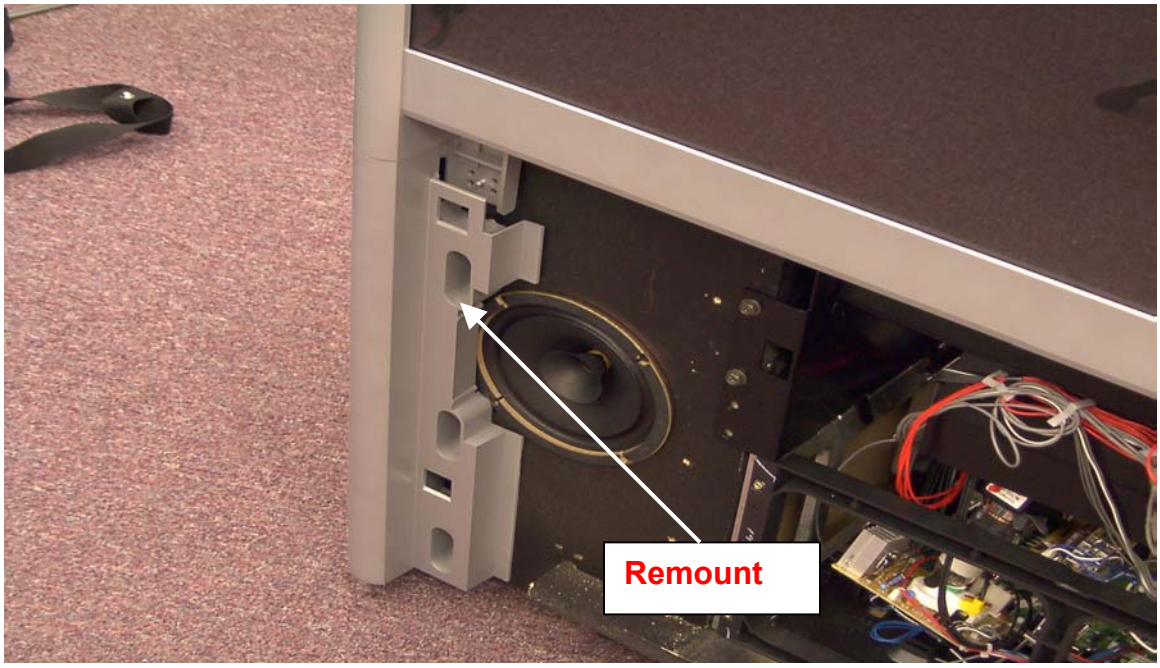


Figure 9

10. Finally, holding the top of the screen and bezel, remove the 2 screws in the top section of the back. Still holding the screen, move to the front of the unit. Let the top of the screen tilt forward and lift upward. Set the screens and bezel aside in a safe place to prevent damage *(Figure 10).*

Figure 10

11. Now unplug the IR receiver in the upper part of the case *(Figure 11).*

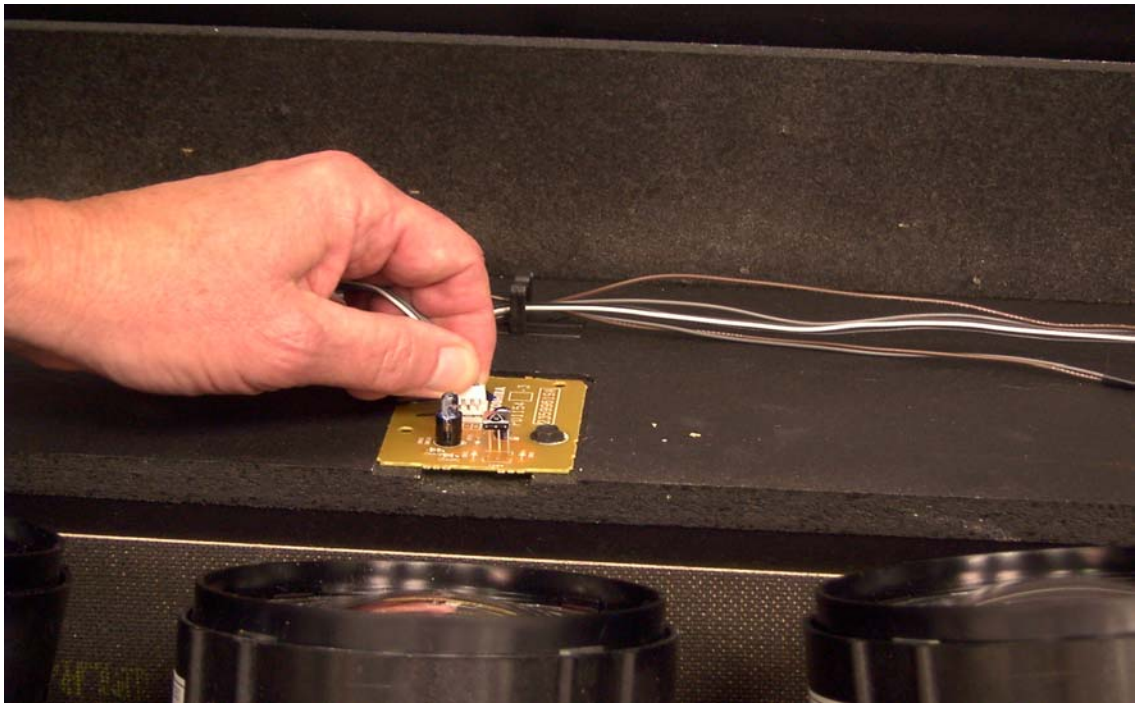


Figure 11

12. Then unplug the speaker cable located on the main signal PCB directly in front of the audio output IC. This cable is routed through the cutout at the left of the light box. Pull this cable up to protect it and secure it with the cable clamps in the upper part of the cabinet *(Figure 12).*

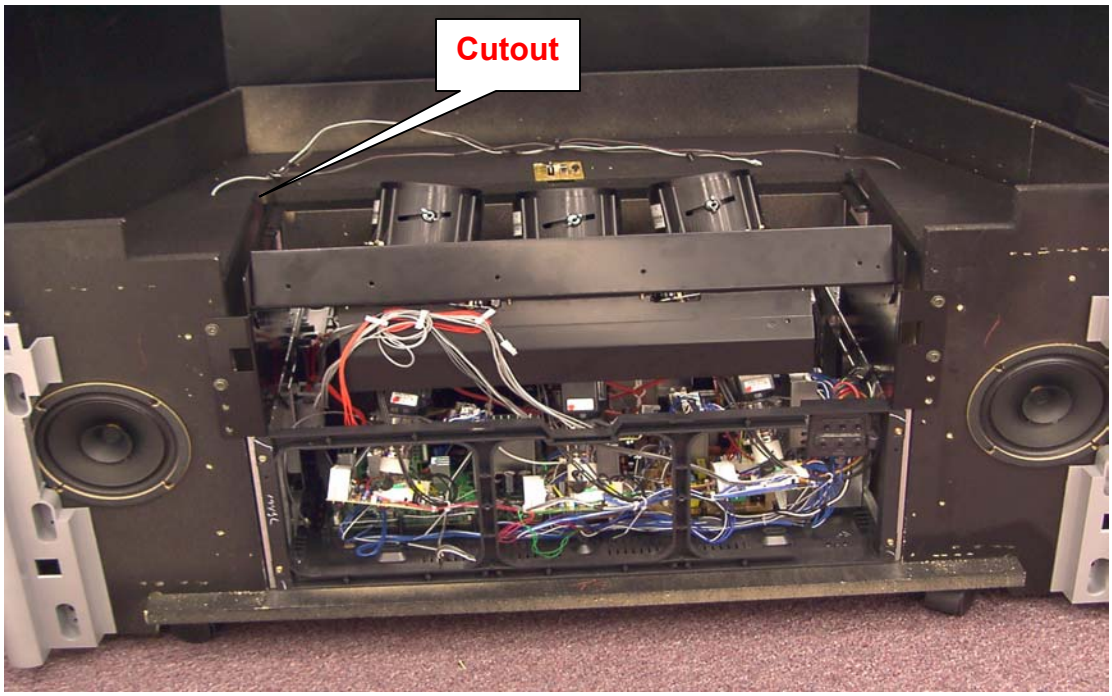


Figure 12

13. To remove the chassis assembly, remove the four screws, two on each side of the front plate holding the CRT assemblies *(Figure 13)*.

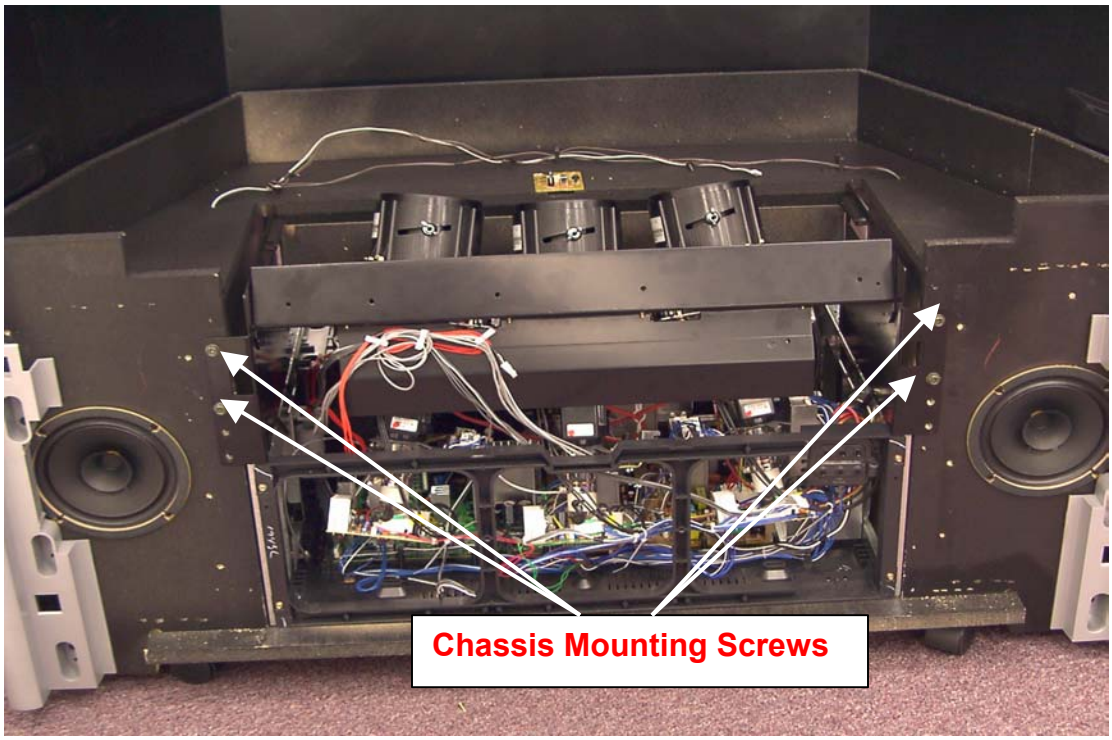


Figure 13

14. Next remove the four screws holding the back panel to the cabinet *(Figure 14)*.

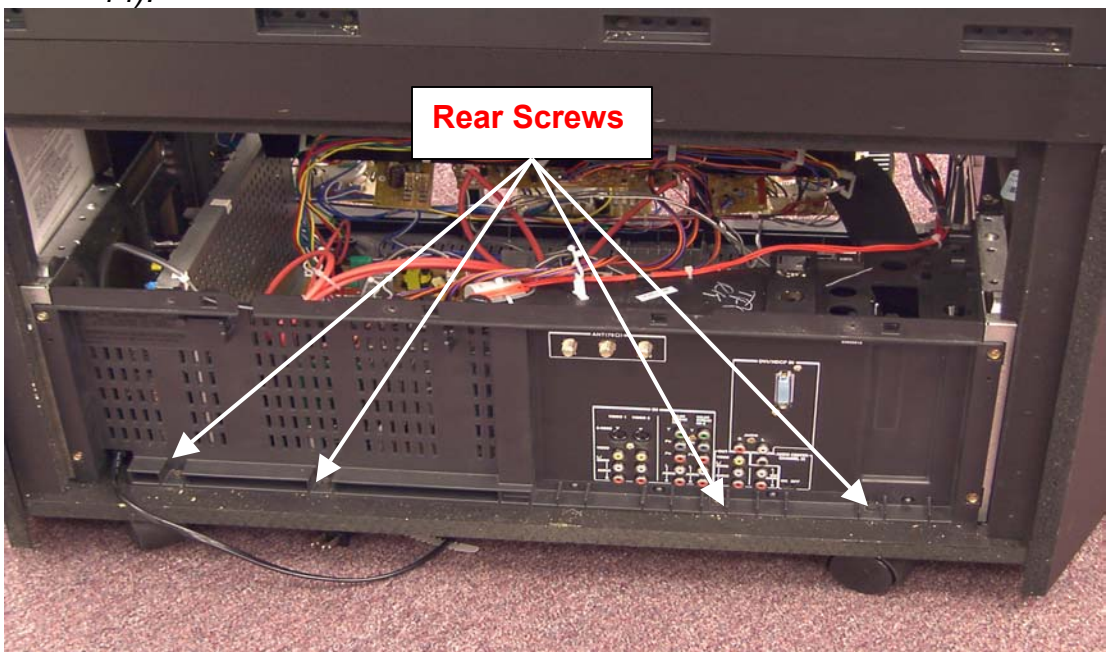


Figure 14

15. Finally, grasp the metal CRT bracing and lift the front slightly. Then pull the entire chassis forward and out the front of the cabinet. Be careful not to pinch any cable assemblies as this is done *(Figure 15).*

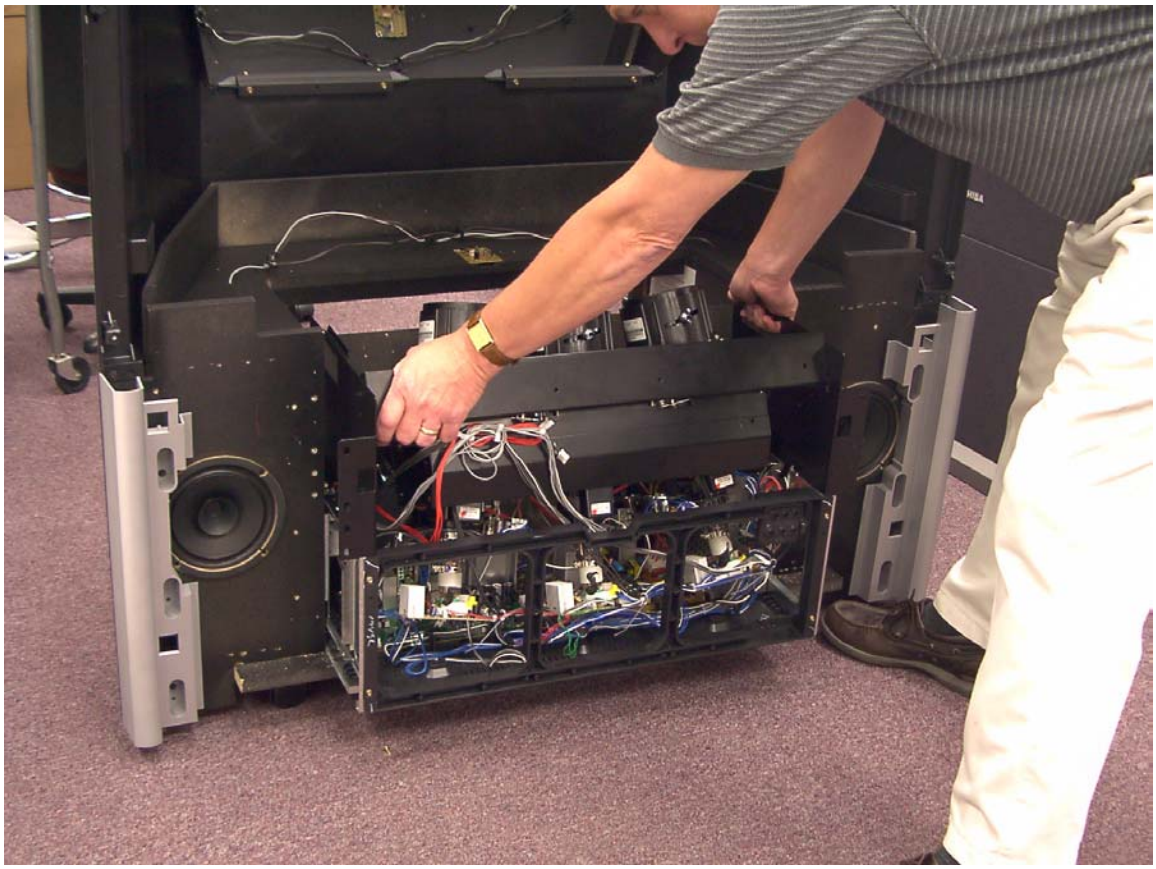


Figure 15

LIGHT BOX SERVICE POSITION

The objective of this section is to show the N3PSP in a serviceable position along with a simplified block diagram indicating the various sections of the unit. Figure 16 is a picture of the unit with the “light box” and power supply removed and placed in a serviceable position.

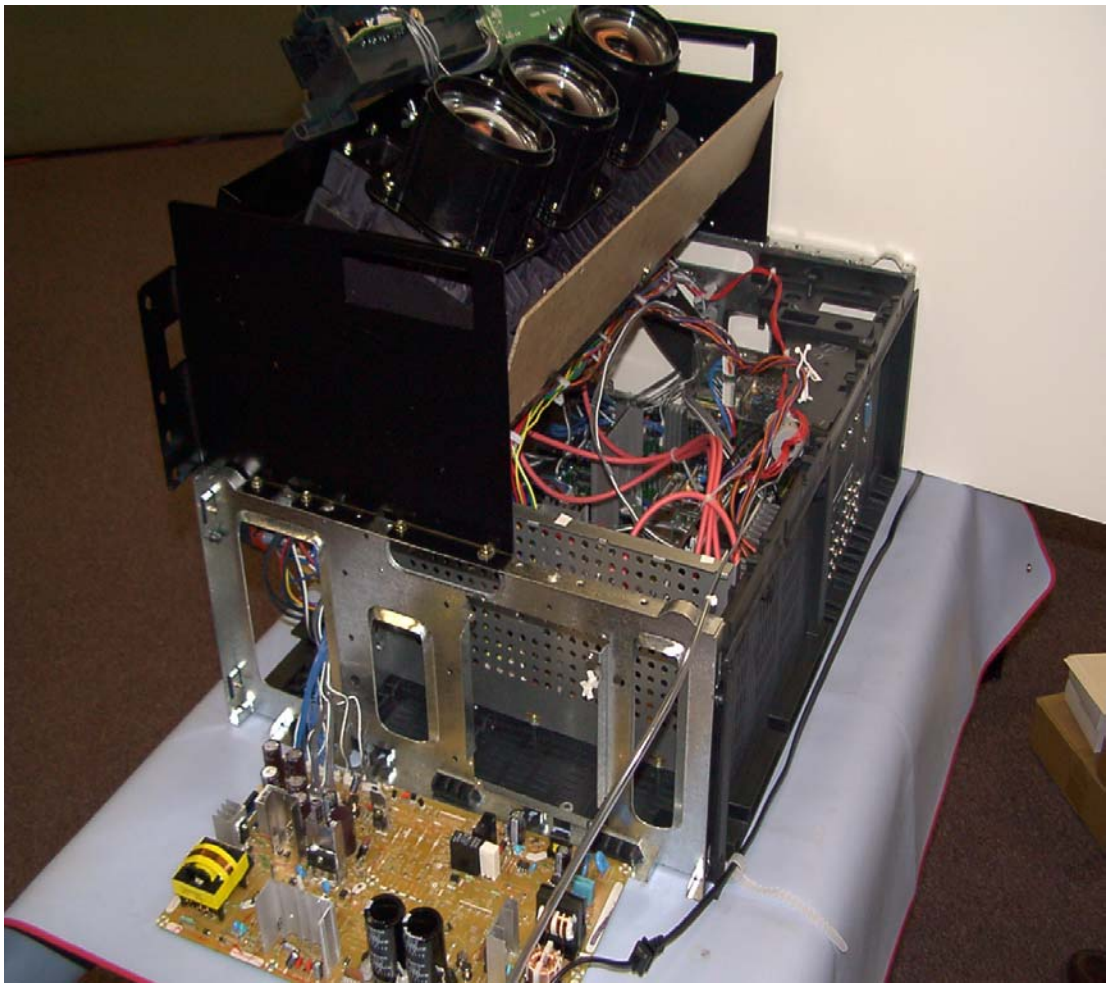


Figure 16

Notice that the power supply can be moved to almost any position so that it can be serviced to component level. Also be aware that standby, full power, and shutdown sections are all included on the power supply board.

Notice that with the unit removed from the cabinet, it can be checked for normal operation. To do this, place a white target (poster board) 30 to 35 inches from the focus lenses on the CRT's *(Figure 17).* Convergence and raster shape will not be exact because of the trapezoidal distortion caused when the optical system (mirror and screen) of the receiver is missing. However, the center portion of the image will verify normal operation.

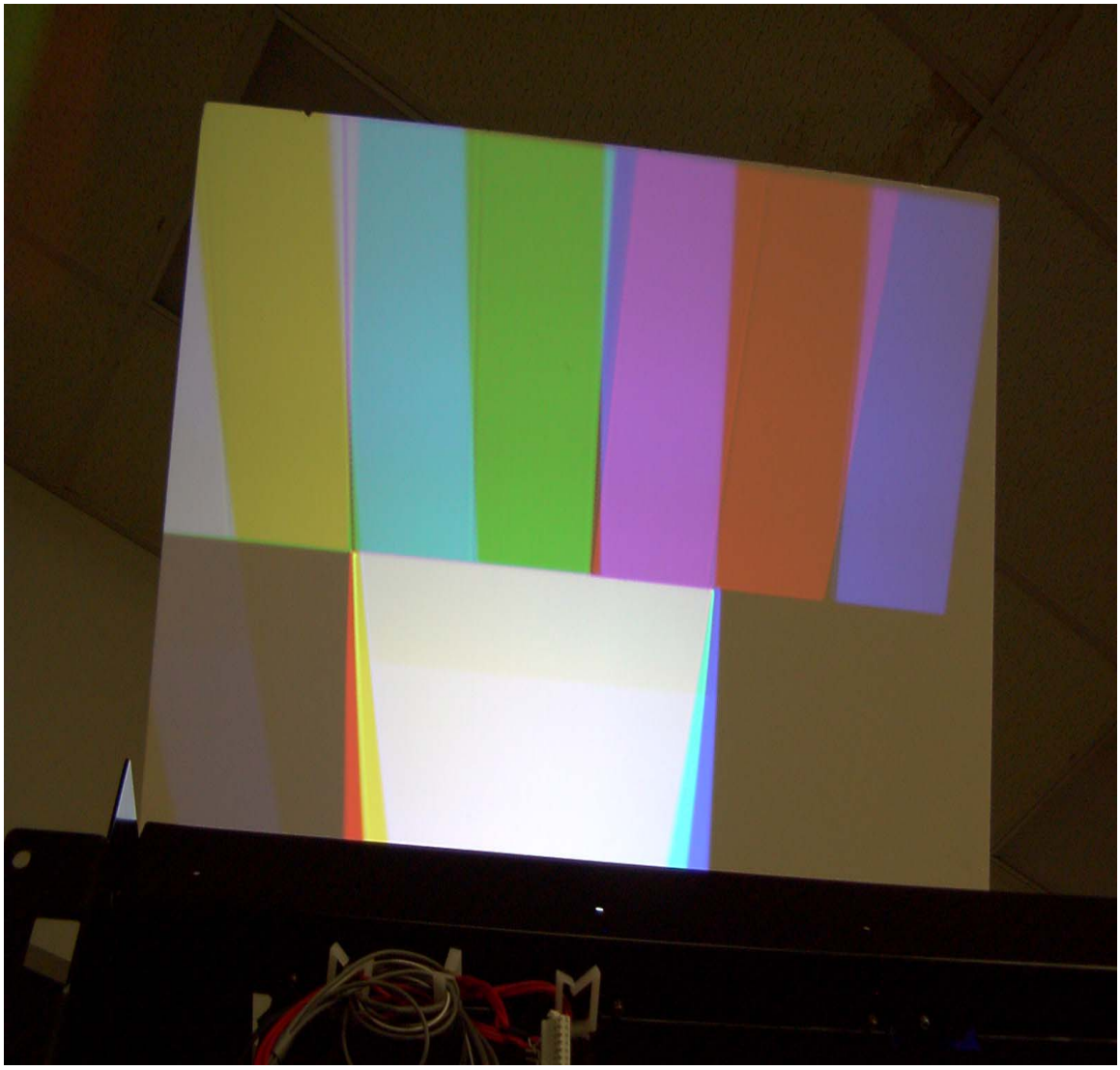


Figure 17

POWER SUPPLY REMOVAL

The power supply in this unit is serviceable to component level. This section of the disassembly process demonstrates the easiest method of power supply removal and reinstallation. In addition, a service position is suggested so the supply can be accessed while it is connected and operational.
The easiest method of supply removal begins by removing the back cover of the light box. Remove 10 screws as shown in Figure 19. It is not necessary to remove the screws holding the antenna switching unit and the DVI/D jack assembly.

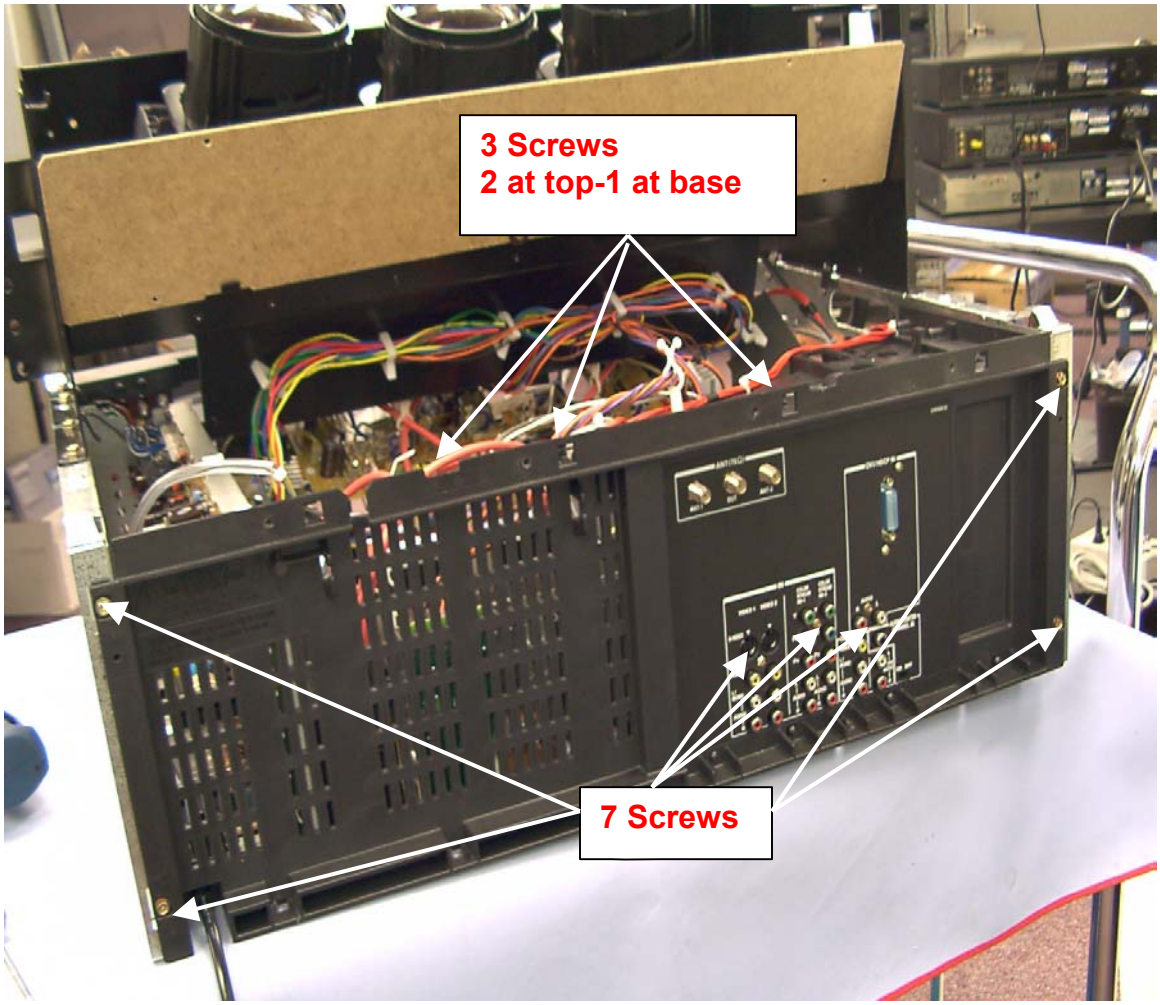


Figure 19

Next unplug six connectors at the upper left corner of the supply *(Figure 20)*. The connectors are not marked but this is not important because their size will only allow them to fit properly on their intended sockets.

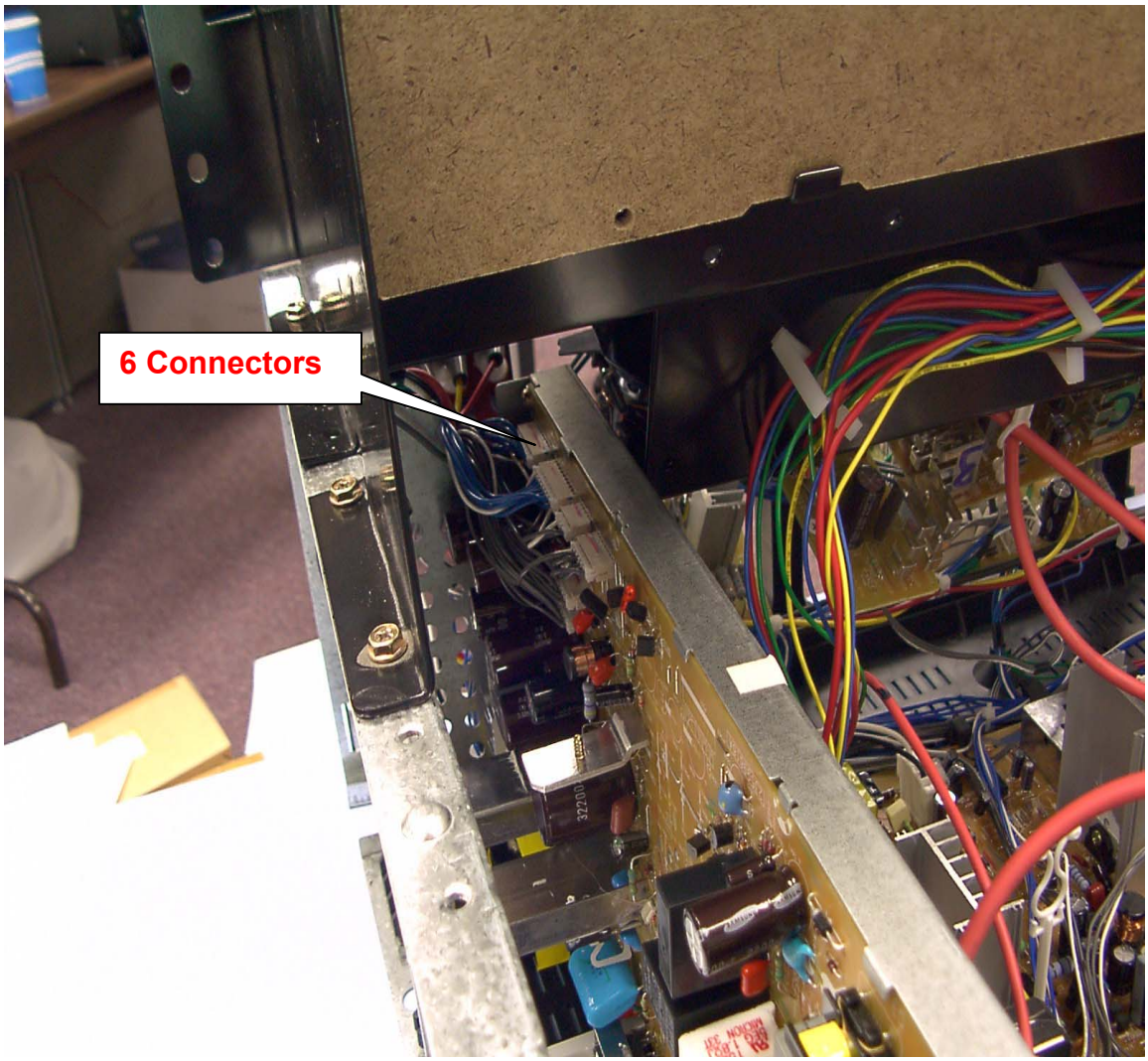


Figure 20

Now unplug the AC input (squeeze the plug release to free it) and the ground plug located on the lower right side of the supply *(Figure 21).*

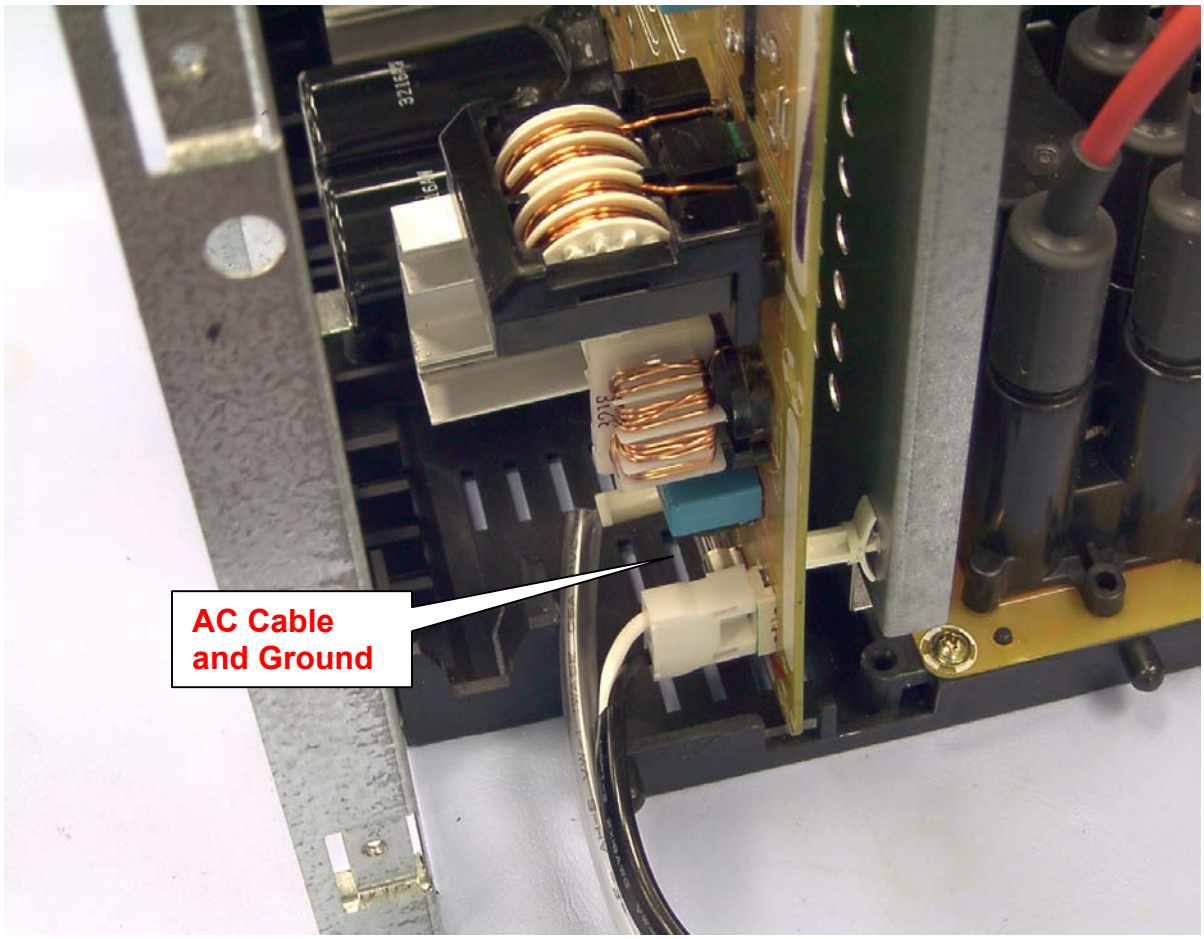


Figure 21

The power supply is held to the frame by two restraints. The first is a screw located in the upper left corner of the board. To remove this screw, locate the access hole in the frame and insert a screwdriver through the hole *(Figure 22).*

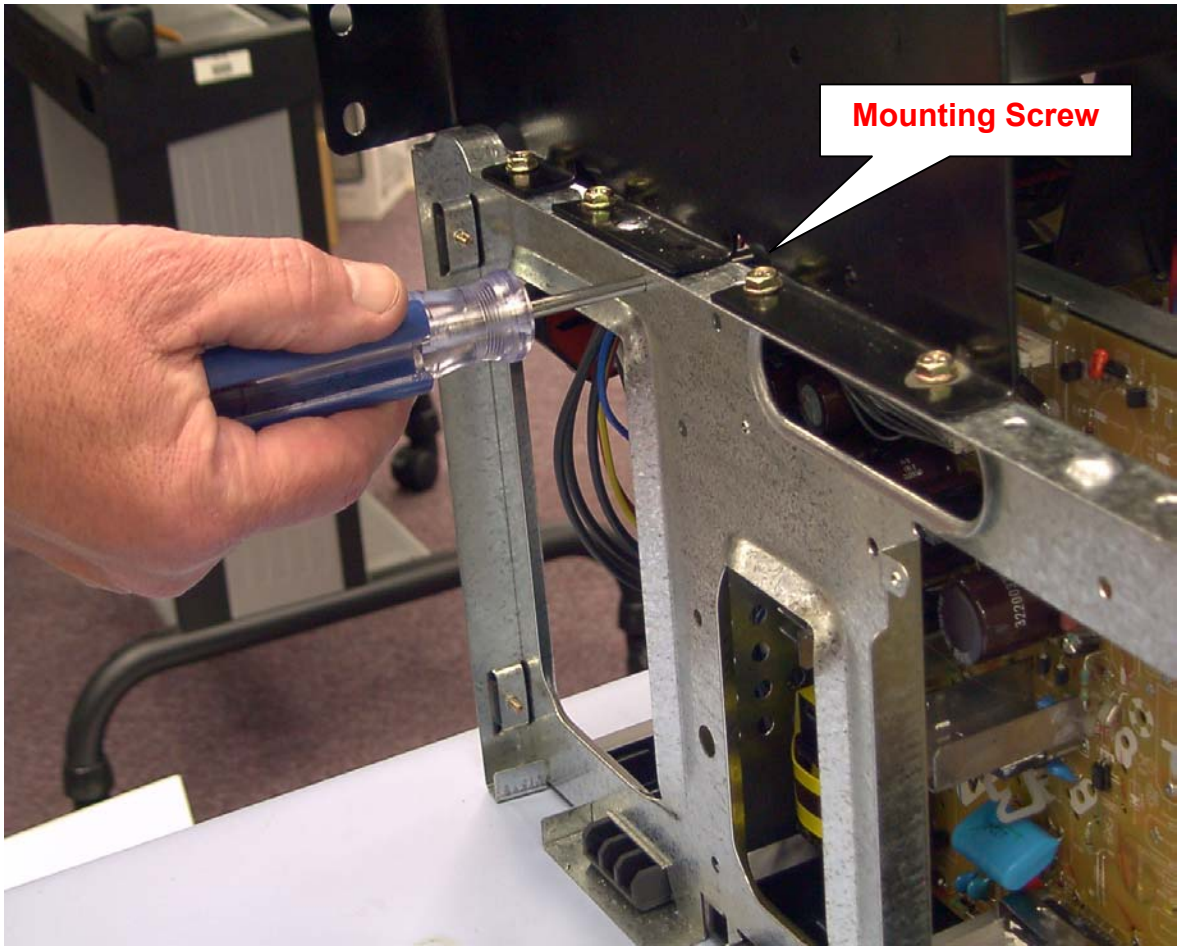


Figure 22

The second restraint is a fiber standoff that protrudes through the PCB near the center *(Figure 23).* Squeeze the restraint while moving the board outward. Now use a small screwdriver to force the PCB downward and outward to remove it from the shield guides. Move the board away from the shielding and out at the rear of the light box.

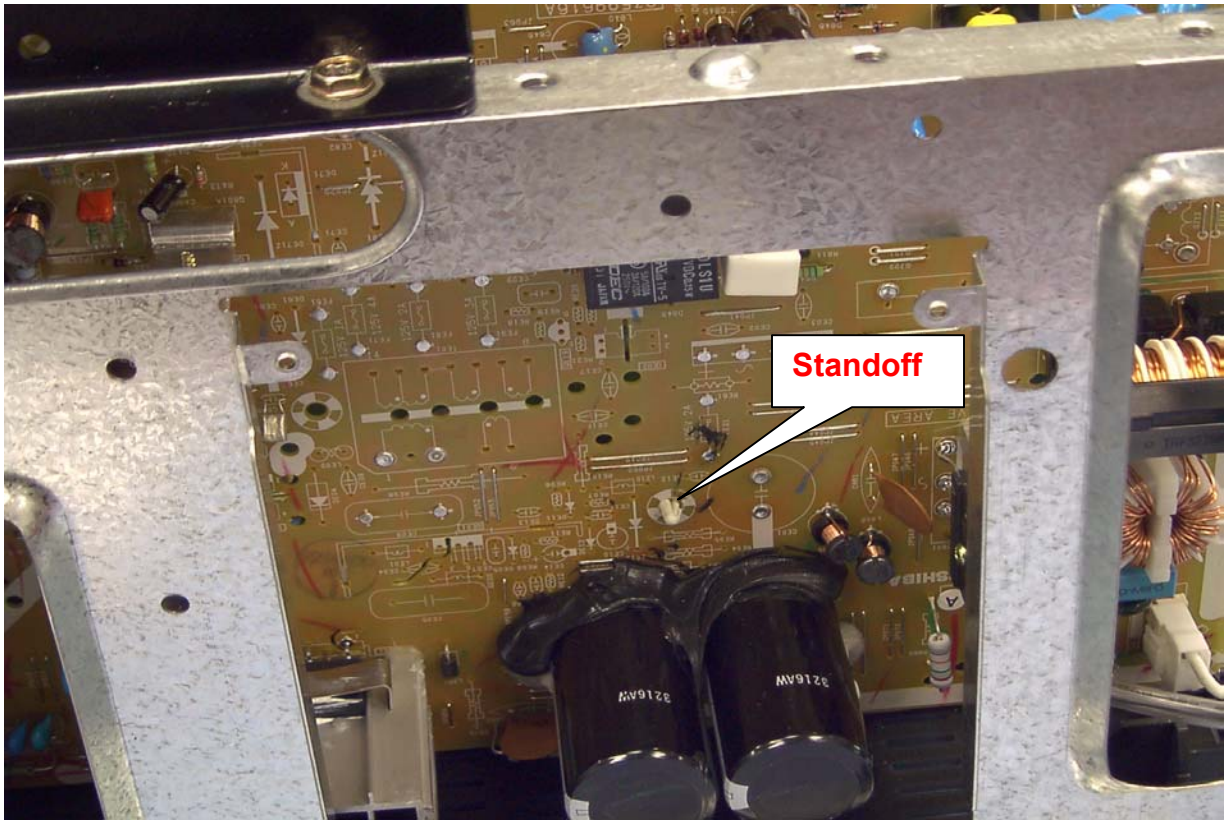


Figure 23

To troubleshoot the power supply board, place it in the service position shown in figure 24. Remove the six cables from their cable clamps as necessary and reconnect them to the power supply board. Then plug in the AC input and ground cables. After this is done, the unit can be operated with the power supply board removed.

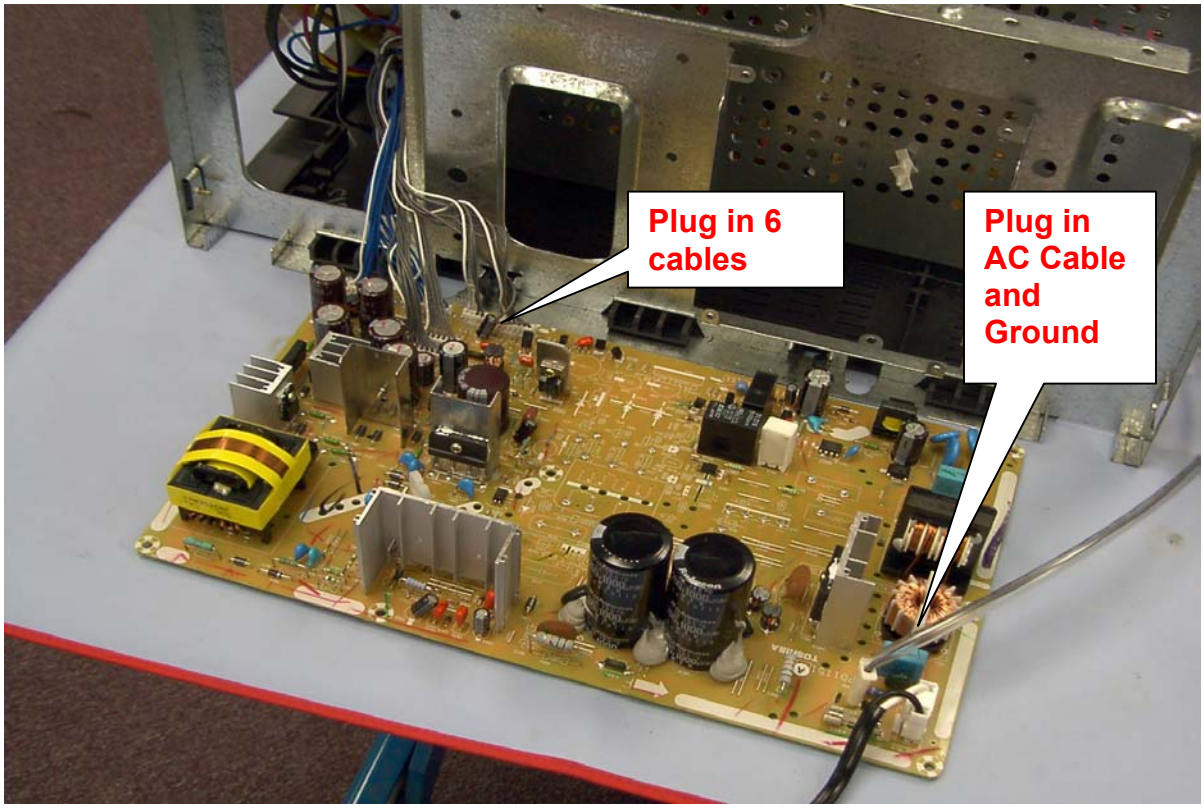


Figure 24

One additional aspect should be noted at this point. The bulk of the other PCBs can be accessed from the bottom. However, if these boards do need to be removed for any reason, removal of the back cover will aid this process as well *(Figure 25)*.

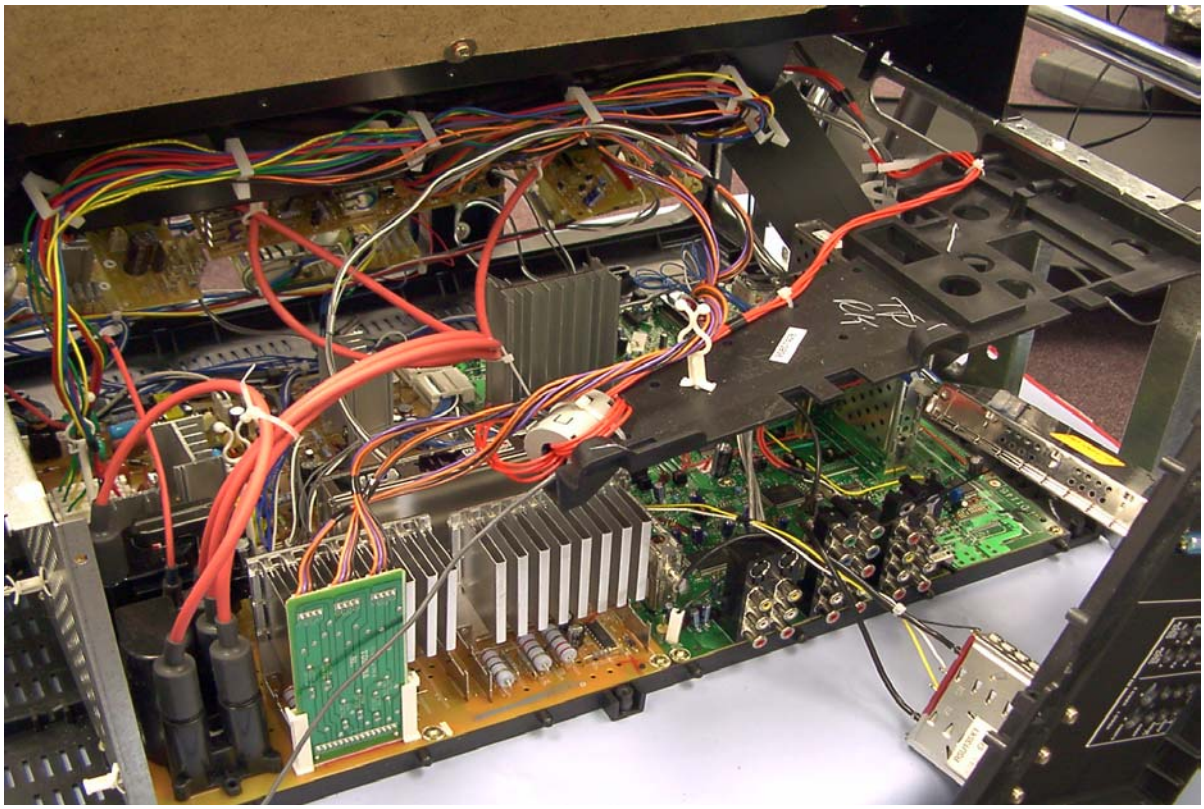


Figure 25

MECHANICAL AND ELECTRICAL ADJUSTMENTS

When making mechanical or electrical adjustments to the N3PSP, allow the unit to warm up for at least 15 minutes. The mechanical and electrical adjustments on this Toshiba chassis family will vary somewhat, depending on the model and screen size. In addition, most of the electrical adjustments require the unit to be placed in the service mode and the adjustments are actually made by changing data in a software register.
Always consult the service manual addressing the particular model being serviced.

ELECTRICAL

In addition to the adjustments made to the software registers, other electrical adjustments include dynamic focus and screen controls for each CRT. Again, consult the service manual addressing these adjustments for proper procedures.

MECHANICAL

The first two mechanical adjustments found in this unit are mechanical tilt or deflection yoke tilt and mechanical centering. Both of these adjustments are accessible from the front after the speaker grille and cover located between the speakers are removed (*Figure 26*). Like the electrical adjustments, proper procedure is explained in the service manual pertaining to the product.

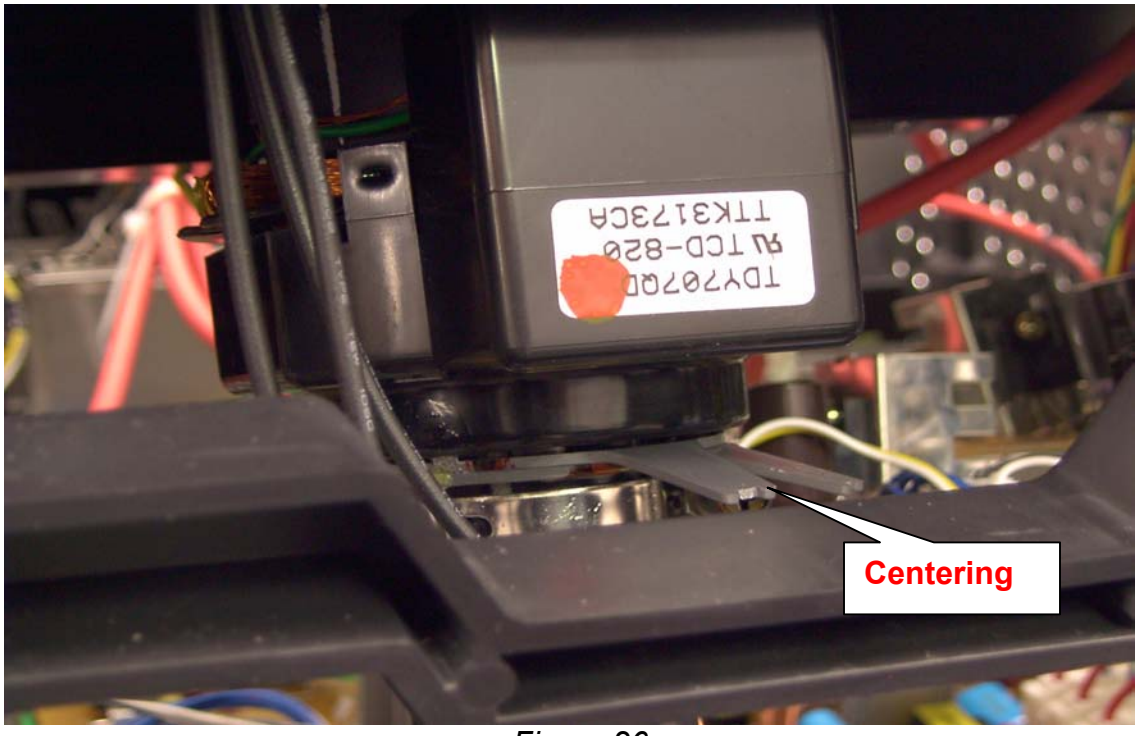


Figure 26

The third adjustment is mechanical focus. This adjustment can be done with the wing nuts on the front of the focus lenses (*Figure 27*). Facing the front of the unit, the red CRT and lens assembly is on the left, green is in the center, and blue is on the right.

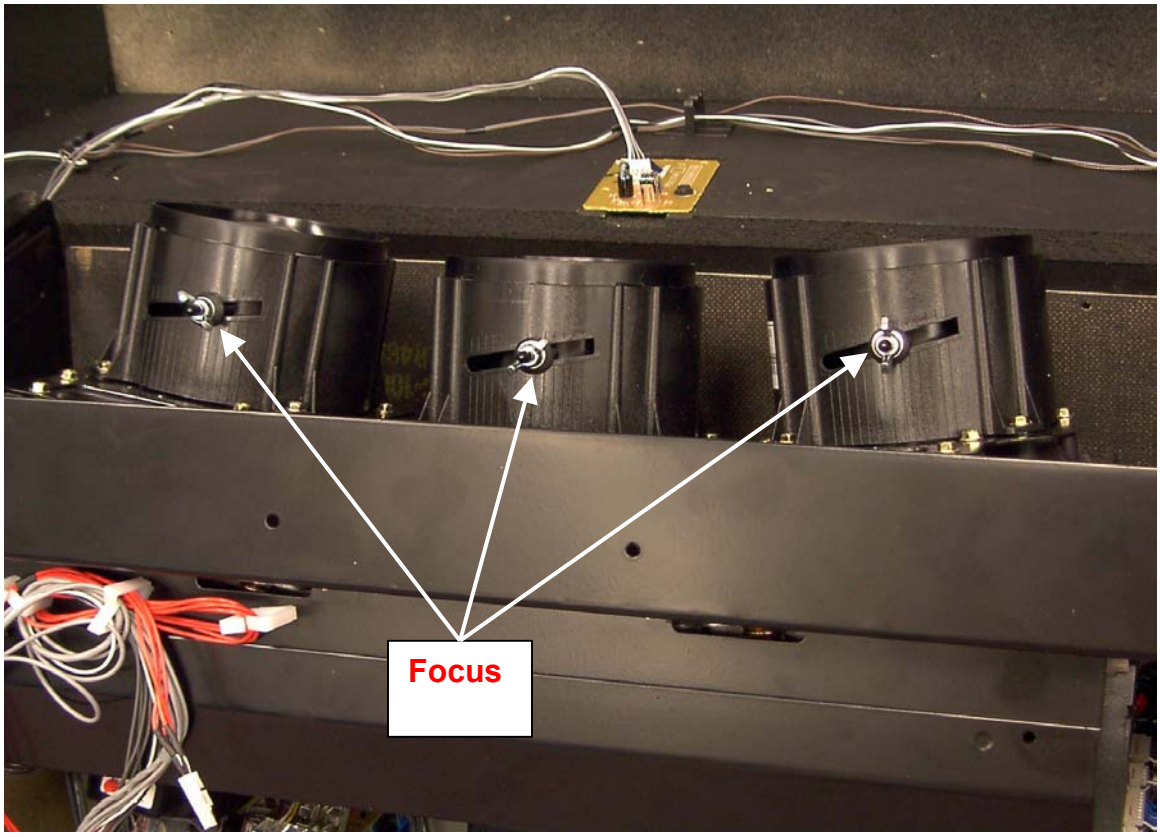


Figure 27

Two different adjustment procedures are used, depending on the screen size of the unit. The larger screen sizes employ a system to hang the screen higher so the focus adjustments can be accessed from the front by reaching under the screen *(Figure 28).*

Figure 28

Fifty-one inch and smaller sizes require the screen to be mounted in its normal position. In these units, the servicer must reach behind the screen to make mechanical focus adjustments. When doing this, the screen must remain against the front of the cabinet to maintain proper focal length while making the adjustment.

If it becomes necessary or more convenient when servicing the smaller screens, the lenses can be detached, rotated 180 degrees, and remounted so that the wing nut adjustments face the rear of the unit. To turn the lenses around, remove the 4 screws in the lens mounting tabs (*Figure 29*). **(Take care not to loosen the hex head bolts with springs. These hold the lens to the face of the CRT and fluid leakage will occur if they are loosened)** Rotate the lens 180 degrees and replace the screws in the mounting tabs. Remove the light shield by removing one screw from the center *(Figure 30).* With the light shield removed, the mechanical focus adjustments can be made from the rear. Observe the backside of the screen as the lenses are adjusted to attain proper focus.

Figure 29

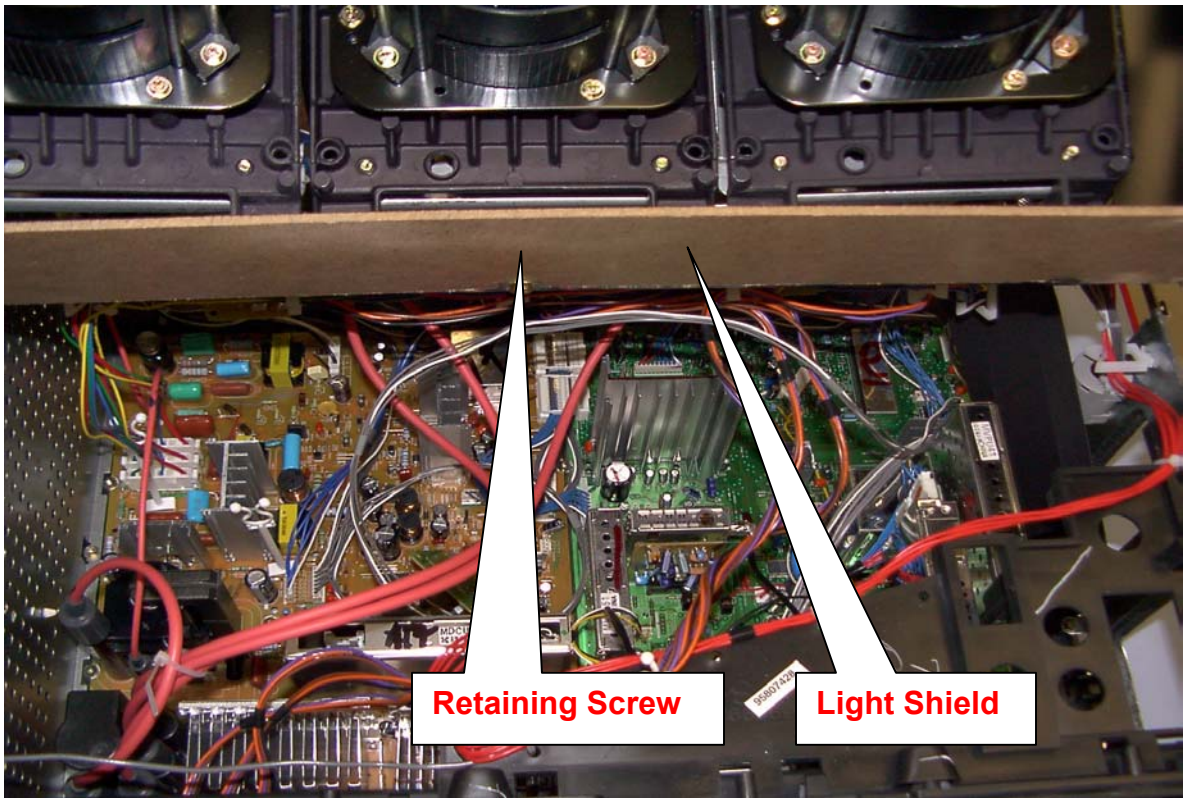


Figure 30

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CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*
- *The PC board assembly with ∗mark is no longer available after the end of the production.*

Models : 51H83, 57H83, 65H83

Capacitors	CD	:	Ceramic Disk	PF	:	Plastic Film	EL	: Electrolytic
Resistors	CF	:	Carbon Film	CC	:	Carbon Composition	MF	: Metal Film
	OMF	:	Oxide Metal Film	VR	:	Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
CAPACITORS		
C101	24797339	ELECTROLYTIO, 50V 3.3UF M
C102	24665221	ELECTROLYTIC, 10V 220UF M 3A
C105	24100102	CERAMIC CHIP, 50V F 1000PF Z
C106	24669479	ELECTROLYTIC, 50V 4.7UF M 3A
C107	24666221	ELECTROLYTIC, 16V 220UF M 3A
C108	24665221	ELECTROLYTIC, 10V 220UF M 3A
C112	24665221	ELECTROLYTIC, 10V 220UF M 3A
C115	24100102	CERAMIC CHIP, 50V F 1000PF Z
C117	24666221	ELECTROLYTIC, 16V 220UF M 3A
C119	24109473	CERAMIC CHIP, 25V B 0.047UF K
C198	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C199	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C205	24766229	ELECTROLYTIC, 50V 2.2UF M
C206	24797229	ELECTROLYTIC, 50V 2.2UF M
C221	24503041	PLASTIC FILM , 63V 0.1UF J
C301	24503053	PLASTIC FILM, 63V 1UF J
C302	24669010	ELECTROLYTIC, 50V 1UF M 3A
C303	24503053	PLASTIC FILM, 63V 1UF J
C308	24567223	PLASTIC FILM, 50V 0.022UF J
C309	24109102	CERAMIC CHIP, 50V B 1000PF K
C310	24073053	ELECTROLYTIC, 25V 100UF M 3A
C311	24109103	CERAMIC CHIP, 50V B 0.01UF K
C312	24109332	CERAMIC CHIP, 50V B 3300PF K
C314	24503037	MT PLA CAP 63V 0.047UF J
C315	24073020	ELECTROLYTIC, 10V 1000UF M 3A
C320	24669101	ELECTROLYTIC, 50V 100UF M 3A
C321	24669101	ELECTROLYTIC, 50V 100UF M 3A
C323	24109473	CERAMIC CHIP, 25V B 0.047UF K
C324	24503053	PLASTIC FILM, 63V 1UF J
C325	24082057	PLASTIC FILM, 100V 0.22UF J
C327	24092730	CERAMIC CHIP, 16V B 0.1UF K
C328	24082256	PLASTIC FILM, 100V 2200PF J
C330	24073034	ELECTROLYTIC, 16V 10UF M 3A
C332	24669101	ELECTROLYTIC, 50V 100UF M 3A
C333	24082272	PLASTIC FILM, 100V 0.047UF J
C334	24109471	CERAMIC CHIP, 50V B 470PF K
C338	24666100	ELECTROLYTIC, 10V 10UF M 3A
C340	24073037	ELECTROLYTIC, 16V 47UF M 3A

Location No.	Parts No.	Description
C361	24092730	CERAMIC CHIP, 16V B 0.1UF K
C362	24109473	CERAMIC CHIP, 25V B 0.047UF K
C370	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C371	24092730	CERAMIC CHIP, 16V B 0.1UF K
C401	24214332	CERAMIC DISC, 500V B 3300PF K
C402	24214391	CERAMIC DISC, 500V B 390PF K
C405	24503041	PLASTIC FILM , 63V 0.1UF J
C412	24828823	PLASTIC FILM, 200V 0.082UF J
C415	24092484	CERAMIC DISC, 2KV B 1500PF K
C416	24676220	ELECTROLYTIC, 100V 22UF M 3A
C417	24503334	PLASTIC FILM CF92 T 250V 1R5UF J
C419	24105331	CERAMIC CHIP, 50V CH 330PF J
C420	24503041	PLASTIC FILM , 63V 0.1UF J
C422	24591102	PLASTIC FILM, 50V 1000PF J
⚠ C423	24503252	PLASTIC FILM, 400V 0.3UF J
⚠ C425	24503142	PLASTIC FILM, 400V 0.27UF J
C426	24211222	CERAMIC DISC, 2KV B 2200PFK
C432	24567333	PLASTIC FILM, 50V 33000PF J
⚠ C440	24503059	PLASTIC FILM CF92 T 1800VH 1000PF H
⚠ C443	24503195	PLASTIC FILM, 1800VH 5100PF H
⚠ C444	24503346	PLASTIC FILM, 1800VH 3300PF H
C445	24828473	PLASTIC FILM, 200V 0.047UF J
C446	24073120	ELECTRPLYTIC, 250V 33UF, 250YXF33M
C448	24073118	ELECTROLYTIC, 160V 33UF M
C449	24214221	CERAMIC DISC, 500V B 220PF K
C450	24073057	ELECTROLYTIC, 25V 1000UF M 3A
C460	24678220	ELECTROLYTIC, 200V 22UF M
C463	24109472	CERAMIC CHIP, 50V B 4700PF K
C464	24503149	PLASTIC FILM, 250V 3.3UF
⚠ C467	24820682	PLASTIC FILM CQ92 T 630V 6800PF J
⚠ C468	24820682	PLASTIC FILM CQ92 T 630V 6800PF J
C473	24503041	PLASTIC FILM , 63V 0.1UF J
C481	24109103	CERAMIC CHIP, 50V B 0.01UF K
C482	24109822	CERAMIC CHIP, 50V B 8200PF K
C491	24666100	ELECTROLYTIC, 10V 10UF M 3A
C496	24503049	PLASTIC FILM, 63V 0.47UF J
C499	24666220	ELECTROLYTIC, 16V 22UF M 3A
C513	24109103	CERAMIC CHIP, 50V B 0.01UF K
C515	24503041	PLASTIC FILM , 63V 0.1UF J

Location No.	Parts No.	Description
C518	24666100	ELECTROLYTIC, 10V 10UF M 3A
C522	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C523	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C524	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C531	24666101	ELECTROLYTIC, 16V 100UF M 3A
C532	24666100	ELECTROLYTIC, 10V 10UF M 3A
C533	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C534	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C535	24109103	CERAMIC CHIP, 50V B 0.01UF K
C536	24109103	CERAMIC CHIP, 50V B 0.01UF K
C537	24109103	CERAMIC CHIP, 50V B 0.01UF K
C538	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C540	24092538	CERAMIC CHIP, 10V F 1UF Z
C541	24092538	CERAMIC CHIP, 10V F 1UF Z
C542	24092538	CERAMIC CHIP, 10V F 1UF Z
C547	24109103	CERAMIC CHIP, 50V B 0.01UF K
C563	24797010	ELECTROLYTIC, 50V 1UF M
C564	24797229	ELECTROLYTIC, 50V 2.2UF M
C565	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C566	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C567	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C568	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C571	24109103	CERAMIC CHIP, 50V B 0.01UF K
C572	24108100	CERAMIC CHIP, 50V SL 10PF D
C573	24108100	CERAMIC CHIP, 50V SL 10PF D
C574	24108100	CERAMIC CHIP, 50V SL 10PF D
C584	24797010	ELECTROLYTIC, 50V 1UF M
C585	24109103	CERAMIC CHIP, 50V B 0.01UF K
C601	24109102	CERAMIC CHIP, 50V B 1000PF K
C602	24109102	CERAMIC CHIP, 50V B 1000PF K
C603	24669100	ELECTROLYTIC, 50V 10UF M 3A
C604	24669100	ELECTROLYTIC, 50V 10UF M 3A
C605	24667470	ELECTROLYTIC, 25V 47UF M 3A
C606	24667470	ELECTROLYTIC, 25V 47UF M 3A
C607	24503041	PLASTIC FILM , 63V 0.1UF J
C608	24503041	PLASTIC FILM , 63V 0.1UF J
C609	24669102	ELECTROLYTIC, 50V 1000UF M 3A
C610	24669102	ELECTROLYTIC, 50V 1000UF M 3A
C611	24668101	ELECTROLYTIC, 35V 100UF M 3A
C612	24666221	ELECTROLYTIC, 16V 220UF M 3A
C613	24669100	ELECTROLYTIC, 50V 10UF M 3A
C661	24797010	ELECTROLYTIC, 50V 1UF M
C662	24797010	ELECTROLYTIC, 50V 1UF M
C663	24797010	ELECTROLYTIC, 50V 1UF M
C665	24109103	CERAMIC CHIP, 50V B 0.01UF K
C666	24797010	ELECTROLYTIC, 50V 1UF M
C667	24794100	ELECTROLYTIC, 16V 10UF M
C680	24669102	ELECTROLYTIC, 50V 1000UF M 3A
C681	24666100	ELECTROLYTIC, 10V 10UF M 3A
C682	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C690	24109103	CERAMIC CHIP, 50V B 0.01UF K
C704	24232103	CERAMIC DISC, 50V F 0.01UF Z
C705	24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
C707	24797101	ELECTROLYTIC, 50V 100UF M (51H83)
C707	24797470	ELECTROLYTIC, 50V 47UF M (57H83/65H83)
C712	24797470	ELECTROLYTIC, 50V 47UF M (57H83/65H83)
C713	24790470	ELECTROLYTIC, 160V 47UF M
C715	24214472	CERAMIC DISC, 500V B 4700PF K
C717	24214472	CERAMIC DISC, 500V B 4700PF K
C718	24666470	ELECTORLYTIC, 16V 47UF M 3A
C719	24435560	CERAMIC DISC, 500V SL 56PF J
C720	24790220	ELECTROLYTIC, 160V 22UF M
C721	24666470	ELECTORLYTIC, 16V 47UF M 3A
C721	24073052	ELECTROLYTIC, 25V 47UF M 3A
C722	24073052	ELECTROLYTIC, 25V 47UF M 3A

Location No.	Parts No.	Description
C723	24109103	CERAMIC CHIP, 50V B 0.01UF K
C724	24109103	CERAMIC CHIP, 50V B 0.01UF K
C726	24212102	CERAMIC DISC, 50V B 1000PF K
C760	24797101	ELECTROLYTIC, 50V 100UF M (51H83)
C760	24797470	ELECTROLYTIC, 50V 47UF M (57H83/65H83)
C761	24212102	CERAMIC DISC, 50V B 1000PF K
C762	24797470	ELECTROLYTIC, 50V 47UF M (57H83/65H83)
C765	24214472	CERAMIC DISC, 500V B 4700PF K
C766	24214472	CERAMIC DISC, 500V B 4700PF K
C767	24790470	ELECTROLYTIC, 160V 47UF M
C768	24666470	ELECTORLYTIC, 16V 47UF M 3A
C769	24666470	ELECTORLYTIC, 16V 47UF M 3A
C770	24435560	CERAMIC DISC, 500V SL 56PF J
C771	24790220	ELECTROLYTIC, 160V 22UF M
C780	24797101	ELECTROLYTIC, 50V 100UF M (51H83)
C780	24797470	ELECTROLYTIC, 50V 47UF M (57H83/65H83)
C781	24212102	CERAMIC DISC, 50V B 1000PF K
C782	24797470	ELECTROLYTIC, 50V 47UF M (57H83/65H83)
C784	24214472	CERAMIC DISC, 500V B 4700PF K
C786	24214472	CERAMIC DISC, 500V B 4700PF K
C787	24790470	ELECTROLYTIC, 160V 47UF M
C788	24666470	ELECTORLYTIC, 16V 47UF M 3A
C789	24666470	ELECTORLYTIC, 16V 47UF M 3A
C790	24435560	CERAMIC DISC, 500V SL 56PF J
C791	24790220	ELECTROLYTIC, 160V 22UF M
⚠ C801	24503002	PLASTIC FILM, AC275V 0.22UF M
⚠ C802	24503002	PLASTIC FILM, AC275V 0.22UF M
C805	24092281	CERAMIC DISC, AC250V E 4700PF
C809	24073119	200V1000U105C, 200MXR1000M30X58
C810	24073119	200V1000U105C, 200MXR1000M30X58
⚠ C811	24092597	CERAMIC DISC CK45E AC250V 4700PF M
⚠ C812	24092597	CERAMIC DISC CK45E AC250V 4700PF M
⚠ C813	24092597	CERAMIC DISC CK45E AC250V 4700PF M
⚠ C814	24092579	CERAMIC DISC, AC250V 470PF K
C826	24503047	PLASTIC FILM, 63V 0.33UF J
C827	24073037	ELECTROLYTIC, 16V 47UF M 3A
C829	24503041	PLASTIC FILM , 63V 0.1UF J
C830	24073037	ELECTROLYTIC, 16V 47UF M 3A
C831	24503047	PLASTIC FILM, 63V 0.33UF J
C832	24073038	ELECTROLYTIC, 16V 100UF M 3A
C833	24073037	ELECTROLYTIC, 16V 47UF M 3A
C834	24503047	PLASTIC FILM, 63V 0.33UF J
C835	24073016	ELECTROLYTIC CE04P 10V 100UF M 3A
C836	24617043	ELECTROLYTIC 04CH 35V 1000UF M
C837	24214221	CERAMIC DISC, 500V B 220PF K
C838	24617006	ELECTROLYTIC, 25V 820UF M
C839	24503041	PLASTIC FILM , 63V 0.1UF J
C840	24679220	ELECTROLYTIC, 250V 22UF M 3A
C841	24666222	ELECTROLYTIC, 16V 2200UF M 3A
C842	24503041	PLASTIC FILM , 63V 0.1UF J
C843	24092333	CERAMIC DISC, 2KV 100PF K
C845	24669229	ELECTROLYTIC, 50V 2.2UF M 3A
C849	24669479	ELECTROLYTIC, 50V 4.7UF M 3A
C850	24668222	ELECTROLYTIC, 35V 2200UF M 3A
C851	24668222	ELECTROLYTIC, 35V 2200UF M 3A
C852	24073094	ELECTROLYTIC, 50V 1000UF M 3A
C853	24669331	ELECTROLYTIC, 50V 330UF M 3A
C860	24214103	CERAMIC DISC, 500V B 0.01UF K
C861	24214103	CERAMIC DISC, 500V B 0.01UF K
C862	24092341	CERAMIC DISC, 2KV R 470PF K
C863	24503045	PLASTIC FILM, 63V 0.22UF J
C866	24503053	PLASTIC FILM, 63V 1UF J
C867	24591472	PLASTIC FILM, 50V 4700PF J
C868	24669101	ELECTROLYTIC, 50V 100UF M 3A
C869	24678229	ELECTROLYTIC, 200V 2.2UF M 3A

Location No.	Parts No.	Description
C870	24503355	PLASTIC FILM, 800V 0.1UF J
C871	24092343	CERAMIC DISC, 2KV 680PF K
C873	24503045	PLASTIC FILM, 63V 0.22UF J
C874	24092337	CERAMIC DISC, 2KV 220PF K
C876	24503049	PLASTIC FILM, 63V 0.47UF J
C877	24092344	CERAMIC DISC, 2KV 820PF K
C879	24214102	CERAMIC DISC, 500V B 1000PF K
C880	24092339	CERAMIC DISC, 2KV 330PF K
C881	24092339	CERAMIC DISC, 2KV 330PF K
C882	24092339	CERAMIC DISC, 2KV 330PF K
C883	24092339	CERAMIC DISC, 2KV 330PF K
C884	24086916	ELECTROLYTIC, 160V 330UF M 3D
C885	24073095	ELECTROLYTIC, 50V 2200UF M 3A
C886	24591152	PLASTIC FILM, 50V 1500PF J
C887	24678478	ELECTROLYTIC, 200V 0.47UF M 3A
C888	24082229	PLASTIC FILM, 250V 0.1UF D
C891	24214471	CERAMIC DISC, 500V B 470PF K
C892	24214471	CERAMIC DISC, 500V B 470PF K
C893	24073060	ELECTROLYTIC, 25V 4700UF M 3A
C894	24073060	ELECTROLYTIC, 25V 4700UF M 3A
C898	24503041	PLASTIC FILM , 63V 0.1UF J
C901	24211102	CERAMIC DISC, 2KV B 1000PF K
C902	24794101	ELECTROLYTIC, 16V 100UF M
C903	24232103	CERAMIC DISC, 50V F 0.01UF Z
C904	24436561	CERAMIC DISC, 50V SL 560PF J (51H83)
C904	24436221	CERAMIC DISC, 50V SL 220PF J (57H83/65H83)
C906	24679220	ELECTROLYTIC, 250V 22UF M 3A (57H83/65H83)
C907	24214101	CERAMIC DISC, 500V B 100PF K
C911	24211102	CERAMIC DISC, 2KV B 1000PF K
C912	24794101	ELECTROLYTIC, 16V 100UF M
C913	24232103	CERAMIC DISC, 50V F 0.01UF Z
C914	24436681	CERAMIC DISC, 50V SL 680PF J (51H83)
C914	24436221	CERAMIC DISC, 50V SL 220PF J (57H83/65H83)
C915	24679330	ELECTROLYTIC, 250V 33UF M 3A (51H83)
C915	24679220	ELECTROLYTIC, 250V 22UF M 3A (57H83/65H83)
C917	24214101	CERAMIC DISC, 500V B 100PF K
C921	24211102	CERAMIC DISC, 2KV B 1000PF K
C922	24794101	ELECTROLYTIC, 16V 100UF M
C923	24436681	CERAMIC DISC, 50V SL 680PF J (51H83)
C923	24436221	CERAMIC DISC, 50V SL 220PF J (57H83/65H83)
C924	24232103	CERAMIC DISC, 50V F 0.01UF Z
C925	24679220	ELECTROLYTIC, 250V 22UF M 3A (57H83/65H83)
C926	24214101	CERAMIC DISC, 500V B 100PF K
C930	24214103	CERAMIC DISC, 500V B 0.01UF K (57H83/65H83)
C935	24214103	CERAMIC DISC, 500V B 0.01UF K (57H83/65H83)
C936	24214103	CERAMIC DISC, 500V B 0.01UF K (57H83/65H83)
C961	24763102	ELECTROLYTIC, 16V 1000UF M
C962	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
C967	24436331	CERAMIC DISC, 50V SL 330PF J (51H83)
C967	24436471	CERAMIC DISC, 50V SL 470PF J (57H83)
C967	24436821	CERAMIC DISC, 50V SL 820PF J (65H83)
C2020	24109103	CERAMIC CHIP, 50V B 0.01UF K
C2102	24108100	CERAMIC CHIP, 50V SL 10PF D
C2103	24108100	CERAMIC CHIP, 50V SL 10PF D
C2104	24108100	CERAMIC CHIP, 50V SL 10PF D
C2110	24109103	CERAMIC CHIP, 50V B 0.01UF K

Location No.	Parts No.	Description
C2111	24763101	ELECTROLYTIC, 16V 100UF M
C2112	24109103	CERAMIC CHIP, 50V B 0.01UF K
C2113	24092731	CERAMIC CHIP, 16V B 1UF K
C3110	24092730	CERAMIC CHIP, 16V B 0.1UF K
C4401	24073039	ELECTROLYTIC, 16V 220UF M 3A
C4402	24109103	CERAMIC CHIP, 50V B 0.01UF K
C4403	24073081	ELECTROLYTIC, 50V 1.OUF M 3A
C4404	24109103	CERAMIC CHIP, 50V B 0.01UF K
C4405	24100104	CERAMIC CHIP, 25V F 0.1UF Z
C4406	24109103	CERAMIC CHIP, 50V B 0.01UF K
C4407	24073039	ELECTROLYTIC, 16V 220UF M 3A
C4420	24109103	CERAMIC CHIP, 50V B 0.01UF K
C4430	24073034	ELECTROLYTIC, 16V 10UF M 3A
C4603	24109471	CERAMIC CHIP, 50V B 470PF K
C5020	24109103	CERAMIC CHIP, 50V B 0.01UF K
C5030	24763101	ELECTROLYTIC, 16V 100UF M
C5080	24797010	ELECTROLYTIC, 50V 1UF M
C5090	24763101	ELECTROLYTIC, 16V 100UF M
C5140	24666100	ELECTROLYTIC, 10V 10UF M 3A
C7701	24567334	PLASTIC FILM, 50V 0.33UF J
C7704	24073053	ELECTROLYTIC, 25V 100UF M 3A
C7705	24073053	ELECTROLYTIC, 25V 100UF M 3A
C7706	24567334	PLASTIC FILM, 50V 0.33UF J
C7721	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7722	24105331	CERAMIC CHIP, 50V CH 330PF J
C7724	24073090	ELECTROLYTIC, 50V 100UF M 3A
C7725	24073090	ELECTROLYTIC, 50V 100UF M 3A
C7726	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7727	24105331	CERAMIC CHIP, 50V CH 330PF J
C7729	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7730	24105331	CERAMIC CHIP, 50V CH 330PF J
C7732	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7733	24105331	CERAMIC CHIP, 50V CH 330PF J
C7735	24073090	ELECTROLYTIC, 50V 100UF M 3A
C7736	24073090	ELECTROLYTIC, 50V 100UF M 3A
C7737	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7738	24105331	CERAMIC CHIP, 50V CH 330PF J
C7740	24105102	CERAMIC CHIP, 25V CH 1000PF J
C7741	24105331	CERAMIC CHIP, 50V CH 330PF J
C7766	24667221	ELECTROLYTIC, 25V 220UF M 3A
C7769	24109103	CERAMIC CHIP, 50V B 0.01UF K
C7774	24073016	ELECTROLYTIC CE04P 10V 100UF M 3A
C7775	24073063	ELECTROLYTIC CE04P 35V 4.7UF M 3A
C7776	24092730	CERAMIC CHIP, 16V B 0.1UF K
C7777	24092730	CERAMIC CHIP, 16V B 0.1UF K
C7779	24105331	CERAMIC CHIP, 50V CH 330PF J
C7780	24436471	CERAMIC DISC, 50V SL 470PF J
C7783	24436471	CERAMIC DISC, 50V SL 470PF J
C7788	24353101	CERAMIC DISC, 50V CH 100PF J
C7789	24591472	PLASTIC FILM, 50V 4700PF J
C7791	24073056	ELECTROLYTIC, 25V 470UF M 3A
C7792	24591472	PLASTIC FILM, 50V 4700PF J
C7793	24567104	PLASTIC FILM, 50V 0.1UF J
C7794	24567104	PLASTIC FILM, 50V 0.1UF J
C7795	24591222	PLASTIC FILM, 50V 2200PF J
C7796	24073091	ELECTROLYTIC, 50V 220UF M 3A
C7797	24073094	ELECTROLYTIC, 50V 1000UF M 3A
C7798	24073091	ELECTROLYTIC, 50V 220UF M 3A
C7810	24092511	CERAMIC CHIP, 50V CH 470PF B
C7811	24105561	CERAMIC CHIP, 50V CH 560PF J
C7812	KETSU	
C7813	24667101	ELECTROLYTIC, 25V 100UF M 3A
C7815	KETSU	
C7817	24591332	PLASTIC FILM, 50V 3300PF J
C7818	24591102	PLASTIC FILM, 50V 1000PF J

Location No.	Parts No.	Description
C7819	24591102	PLASTIC FILM, 50V 1000PF J
C7820	24591222	PLASTIC FILM, 50V 2200PF J
C7821	24669010	ELECTROLYTIC, 50V 1UF M 3A
C7822	24503053	PLASTIC FILM, 63V 1UF J
C9100	24436331	CERAMIC DISC, 50V SL 330PF J (51H83)
C9100	24436471	CERAMIC DISC, 50V SL 470PF J (57H83)
C9100	24436821	CERAMIC DISC, 50V SL 820PF J (65H83)
C9200	24436331	CERAMIC DISC, 50V SL 330PF J (51H83)
C9200	24436471	CERAMIC DISC, 50V SL 470PF J (57H83)
C9200	24436821	CERAMIC DISC, 50V SL 820PF J (65H83)
CA04	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA05	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA06	24109392	CERAMIC CHIP, 50V B 3900PF K
CA07	24109392	CERAMIC CHIP, 50V B 3900PF K
CA08	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA09	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA10	24105101	CERAMIC CHIP, 50V CH 100PF J
CA14	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA15	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA22	24105101	CERAMIC CHIP, 50V CH 100PF J
CA23	24105101	CERAMIC CHIP, 50V CH 100PF J
CA24	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA25	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA27	24092538	CERAMIC CHIP, 10V F 1UF Z
CA28	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CA30	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CA31	24092538	CERAMIC CHIP, 10V F 1UF Z
CA33	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA34	24092538	CERAMIC CHIP, 10V F 1UF Z
CA37	24105101	CERAMIC CHIP, 50V CH 100PF J
CA38	24105101	CERAMIC CHIP, 50V CH 100PF J
CA39	24105101	CERAMIC CHIP, 50V CH 100PF J
CA42	24109392	CERAMIC CHIP, 50V B 3900PF K
CA45	24105471	CERAMIC CHIP, 50V CH 470PF J
CA46	24105471	CERAMIC CHIP, 50V CH 470PF J
CA49	24105101	CERAMIC CHIP, 50V CH 100PF J
CA52	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA53	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA54	24092730	CERAMIC CHIP, 16V B 0.1UF K
CA55	24105101	CERAMIC CHIP, 50V CH 100PF J
CA59	24105101	CERAMIC CHIP, 50V CH 100PF J
CA60	24105101	CERAMIC CHIP, 50V CH 100PF J
CA61	24666220	ELECTROLYTIC, 16V 22UF M 3A
CA68	24666100	ELECTROLYTIC, 10V 10UF M 3A
CA69	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA71	24105331	CERAMIC CHIP, 50V CH 330PF J
CA72	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CA73	24666100	ELECTROLYTIC, 10V 10UF M 3A
CA80	24503041	PLASTIC FILM , 63V 0.1UF J
CA81	24073015	ELECTROLYTIC, 10V 47UF M 3A
CA82	24503049	PLASTIC FILM, 63V 0.47UF J
CA251	24073015	ELECTROLYTIC, 10V 47UF M 3A
CA331	24073015	ELECTROLYTIC, 10V 47UF M 3A
CA371	24105820	CERAMIC CHIP, 50V CH 82PF J
CA381	24105820	CERAMIC CHIP, 50V CH 82PF J
CA391	24105820	CERAMIC CHIP, 50V CH 82PF J
CA611	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA701	24092538	CERAMIC CHIP, 10V F 1UF Z
CA705	24666100	ELECTROLYTIC, 10V 10UF M 3A
CB01	24794470	ELECTORLYTIC, 16V 47UF M
CB05	24666100	ELECTROLYTIC, 10V 10UF M 3A
CB13	24085970	ELECTROLYTIC, NONPOLAR, 16V 10UF M 7L
CB14	24105331	CERAMIC CHIP, 50V CH 330PF J
CB15	24794100	ELECTROLYTIC, 16V 10UF M
CB40	24092538	CERAMIC CHIP, 10V F 1UF Z

Location No.	Parts No.	Description
CB41	24109222	CERAMIC CHIP, 50V B 2200PF K
CB42	24105561	CERAMIC CHIP, 50V CH 560PF J
CB43	24109332	CERAMIC CHIP, 50V B 3300PF K
CB45	24092538	CERAMIC CHIP, 10V F 1UF Z
CB46	24109222	CERAMIC CHIP, 50V B 2200PF K
CB47	24105561	CERAMIC CHIP, 50V CH 560PF J
CB62	24105331	CERAMIC CHIP, 50V CH 330PF J
CB90	24109103	CERAMIC CHIP, 50V B 0.01UF K
CB91	24666100	ELECTROLYTIC, 10V 10UF M 3A
CC01	24109102	CERAMIC CHIP, 50V B 1000PF K
CC02	24109102	CERAMIC CHIP, 50V B 1000PF K
CC03	24109102	CERAMIC CHIP, 50V B 1000PF K
CC04	24109102	CERAMIC CHIP, 50V B 1000PF K
CC05	24109102	CERAMIC CHIP, 50V B 1000PF K
CC06	24109102	CERAMIC CHIP, 50V B 1000PF K
CC07	24109102	CERAMIC CHIP, 50V B 1000PF K
CC08	24109102	CERAMIC CHIP, 50V B 1000PF K
CC11	24109102	CERAMIC CHIP, 50V B 1000PF K
CC12	24109102	CERAMIC CHIP, 50V B 1000PF K
CI01	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI02	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI03	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI04	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI05	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI07	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI08	24797010	ELECTROLYTIC, 50V 1UF M
CI09	24105470	CERAMIC CHIP, 50V CH 47PF J
CI10	24105180	CERAMIC CHIP, 50V CH 18PF J
CI11	24105270	CERAMIC CHIP, 50V CH 27PF J
CI12	24797478	ELECTROLYTIC, 50V 0.47UF M
CI13	24109102	CERAMIC CHIP, 50V B 1000PF K
CI14	24105470	CERAMIC CHIP, 50V CH 47PF J
CI15	24105390	CERAMIC CHIP, 50V CH 39PF J
CI16	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI17	24092726	CERAMIC CHIP CK733B 16V 2,200,000PFK
CI18	24105181	CERAMIC CHIP, 50V CH 180PF J
CI21	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI23	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI25	24105240	CERAMIC CHIP, 50V CH 24PF J
CI51	24797220	ELECTROLYTIC, 50V 22UF M
CI52	24794101	ELECTROLYTIC, 16V 100UF M
CI53	24797339	ELECTROLYTIO, 50V 3.3UF M
CR41	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CR42	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CR43	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CS01	24797229	ELECTROLYTIC, 50V 2.2UF M
CS02	24797229	ELECTROLYTIC, 50V 2.2UF M
CS03	24797229	ELECTROLYTIC, 50V 2.2UF M
CS04	24797229	ELECTROLYTIC, 50V 2.2UF M
CS05	24797229	ELECTROLYTIC, 50V 2.2UF M
CS06	24797229	ELECTROLYTIC, 50V 2.2UF M
CS07	24797229	ELECTROLYTIC, 50V 2.2UF M
CS08	24797229	ELECTROLYTIC, 50V 2.2UF M
CS09	24797229	ELECTROLYTIC, 50V 2.2UF M
CS10	24797229	ELECTROLYTIC, 50V 2.2UF M
CS11	24797229	ELECTROLYTIC, 50V 2.2UF M
CS12	24797229	ELECTROLYTIC, 50V 2.2UF M
CS13	24794100	ELECTROLYTIC, 16V 10UF M
CS14	24794100	ELECTROLYTIC, 16V 10UF M
CS15	24797229	ELECTROLYTIC, 50V 2.2UF M
CS16	24797229	ELECTROLYTIC, 50V 2.2UF M
CS19	24797479	ELECTROLYTIC, 50V 4.7UF M
CS20	24669478	ELECTROLYTIC, 50V 0.47UF M 3A
CS21	24797479	ELECTROLYTIC, 50V 4.7UF M
CS22	24797479	ELECTROLYTIC, 50V 4.7UF M

Location No.	Parts No.	Description
CS24	24797229	ELECTROLYTIC, 50V 2.2UF M
CS25	24794470	ELECTORLYTIC, 16V 47UF M
CS26	24085944	ELECTROLYTIC, NONPOLAR, 50V 2.2UF M 11L
CS27	24085944	ELECTROLYTIC, NONPOLAR, 50V 2.2UF M 11L
CS30	24797229	ELECTROLYTIC, 50V 2.2UF M
CS31	24797229	ELECTROLYTIC, 50V 2.2UF M
CS122	24797101	ELECTROLYTIC, 50V 100UF M
CS123	24797470	ELECTROLYTIC, 50V 47UF M
CV01	24092621	CERAMIC CHIP, 10V B 1UF K
CV02	24092621	CERAMIC CHIP, 10V B 1UF K
CV03	24092621	CERAMIC CHIP, 10V B 1UF K
CV04	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV05	24092621	CERAMIC CHIP, 10V B 1UF K
CV06	24092621	CERAMIC CHIP, 10V B 1UF K
CV07	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV08	24794101	ELECTROLYTIC, 16V 100UF M
CV09	24092621	CERAMIC CHIP, 10V B 1UF K
CV10	24794100	ELECTROLYTIC, 16V 10UF M
CV11	24092621	CERAMIC CHIP, 10V B 1UF K
CV12	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV13	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV13	24794100	ELECTROLYTIC, 16V 10UF M
CV14	24092621	CERAMIC CHIP, 10V B 1UF K
CV14	24232103	CERAMIC DISC, 50V F 0.01UF Z
CV15	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV15	24232103	CERAMIC DISC, 50V F 0.01UF Z
CV23	24794101	ELECTROLYTIC, 16V 100UF M
CV24	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV37	24797339	ELECTROLYTIO, 50V 3.3UF M
CV38	24109102	CERAMIC CHIP, 50V B 1000PF K
CV39	24109102	CERAMIC CHIP, 50V B 1000PF K
CV40	24794101	ELECTROLYTIC, 16V 100UF M
CV42	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV45	24092621	CERAMIC CHIP, 10V B 1UF K
CV46	24092621	CERAMIC CHIP, 10V B 1UF K
CV47	24092621	CERAMIC CHIP, 10V B 1UF K
CV48	24109332	CERAMIC CHIP, 50V B 3300PF K
CV64	24794471	ELECTROLYTIC, 16V 470UF M
CV65	24794101	ELECTROLYTIC, 16V 100UF M
CV66	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV67	24794100	ELECTROLYTIC, 16V 10UF M
CV68	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CV238	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV244	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV245	24092441	CERAMIC CHIP, 16V F 1UF Z
CV246	24092441	CERAMIC CHIP, 16V F 1UF Z
CV247	24092441	CERAMIC CHIP, 16V F 1UF Z
CV248	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV249	24092441	CERAMIC CHIP, 16V F 1UF Z
CV250	24092441	CERAMIC CHIP, 16V F 1UF Z
CV251	24092441	CERAMIC CHIP, 16V F 1UF Z
CV252	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV253	24092441	CERAMIC CHIP, 16V F 1UF Z
CV254	24092441	CERAMIC CHIP, 16V F 1UF Z
CV255	24092441	CERAMIC CHIP, 16V F 1UF Z
CV256	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV257	24203100	ELECTORLYTIC, 16V 10UF M 7L 3A
CV258	24666471	ELECTROLYTIC, 16V 470UF M 3A
CV259	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV261	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV263	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY101	24092441	CERAMIC CHIP, 16V F 1UF Z
CY102	24794101	ELECTROLYTIC, 16V 100UF M

Location No.	Parts No.	Description
CY103	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CY104	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY105	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY106	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY107	24794100	ELECTROLYTIC, 16V 10UF M
CY108	24100104	CERAMIC CHIP, 25V F 0.1UF Z
CY109	24105101	CERAMIC CHIP, 50V CH 100PF J
CY111	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY112	24105181	CERAMIC CHIP, 50V CH 180PF J
CY113	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY114	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY115	24105390	CERAMIC CHIP, 50V CH 39PF J
CY116	24105470	CERAMIC CHIP, 50V CH 47PF J
CY117	24105180	CERAMIC CHIP, 50V CH 18PF J
CY501	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY502	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY504	24109222	CERAMIC CHIP, 50V B 2200PF K
CY505	24105120	CERAMIC CHIP, 50V CH 12PF J
CY506	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY508	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY512	24092463	CERAMIC CHIP, 16V B 0.22UF K
CY513	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY514	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY515	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY516	24109103	CERAMIC CHIP, 50V B 0.01UF K
CY517	24092731	CERAMIC CHIP, 16V B 1UF K
CY524	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY525	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY526	24092730	CERAMIC CHIP, 16V B 0.1UF K
CY538	24794101	ELECTROLYTIC, 16V 100UF M
CY539	24794102	ELECTROLYTIC, 16V 1000UF M
CY582	24105101	CERAMIC CHIP, 50V CH 100PF J
RESISTORS		
R101	24383183	OXIDE METAL FILM, 2W 18K OHM J
R119	24011202	CHIP, METAL FILM, 1/20W 2K OHM J
R150	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R151	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R152	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R173	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R174	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
R215	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R232	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R240	24367153	CARBON FILM, 1/6W 15K OHM G
R241	24367223	CARBON FILM, 1/6W 22K OHM G
R242	24367223	CARBON FILM, 1/6W 22K OHM G
R243	24367333	CARBON FILM, 1/6W 33K OHM G
R244	24366124	CARBON FILM, 1/6W 120K OHM J
R245	24366472	CARBON FILM, 1/6W 4.7K OHM J
R245	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R246	24366472	CARBON FILM, 1/6W 4.7K OHM J
R247	24366102	CARBON FILM, 1/6W 1K OHM J
R249	24366474	CARBON FILM, 1/6W 470K OHM J
R264	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R265	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R266	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R286	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R287	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R288	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
R302	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R305	24322109	OXIDE METAL FILM, 1W 1 OHM J
R306	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
R307	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R308	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R311	24011563	CHIP, METAL FILM, 1/20W 56K OHM J

Location No.	Parts No.	Description
R312	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R314	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R315	24011681	CHIP, METAL FILM, 1/20W 680 OHM J
R321	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R322	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R325	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R330	24000633	METAL FILM, 1/4W 10K OHM F
R331	24000633	METAL FILM, 1/4W 10K OHM F
R334	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R335	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R336	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R337	24321129	OXIDE METAL FILM, 1/2W 1.2 OHM J
R338	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
R340	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R341	24011183	CHIP, METAL FILM, 1/20W 18K OHM J
R343	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R344	24382151	OXIDE METAL FILM, 1W 150 OHM J
R345	24000445	CHIP JUMPER, 1608TYPE
R346	24382391	OXIDE METAL FILM, 1W 390 OHM J
R348	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R349	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
R350	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
R355	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R360	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R361	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R362	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R363	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R364	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
R365	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R366	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R367	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
R368	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R369	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R370	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R371	24011823	CHIP, METAL FILM, 1/20W 82K OHM J
R372	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R373	24011823	CHIP, METAL FILM, 1/20W 82K OHM J
R374	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R375	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
R376	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R378	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R390	24382561	OXIDE METAL FILM, 1W 560 OHM J
R391	24382561	OXIDE METAL FILM, 1W 560 OHM J
R392	24382561	OXIDE METAL FILM, 1W 560 OHM J
R403	24553101	OXIDE METAL FILM, 1W 100 OHM J
R404	24366272	CARBON FILM, 1/6W 2.7K OHM J
R405	24366101	CARBON FILM, 1/6W 100 OHM J
R406	24383682	OXIDE METAL FILM, 2W 6.8K OHM J
R407	24381100	OXIDE METAL FILM, 1/2W 10 OHM J
R409	24555220	OXIDE METAL FILM, 3W 22 OHM J
R410	24555220	OXIDE METAL FILM, 3W 22 OHM J
R411	24323479	METAL FILM, 2W 4.7 OHM J
R412	24383153	OXIDE METAL FILM, 2W 15K OHM J
R413	24366101	CARBON FILM, 1/6W 100 OHM J
R414	24019259	FUSIBLE, 1/4W 27 OHM G
R415	24366102	CARBON FILM, 1/6W 1K OHM J
R416	24383101	OXIDE METAL FILM, 2W 100 OHM J
R417	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R418	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R419	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R420	24366103	CARBON FILM, 1/6W 10K OHM J
R421	24366223	CARBON FILM, 1/6W 22K OHM J
R422	24366223	CARBON FILM, 1/6W 22K OHM J
R423	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R424	24376104	CARBON FILM, 1/2W 10OK OHM J

Location No.	Parts No.	Description
R425	24376104	CARBON FILM, 1/2W 10OK OHM J
R426	24366101	CARBON FILM, 1/6W 100 OHM J
R427	24366101	CARBON FILM, 1/6W 100 OHM J
R428	24377224	CARBON FILM, 1W 220K OHM J
R429	24942102	CARBON COMPOSITION, 1/2W 1K OHM J
R431	24383102	OXIDE METAL FILM, 2W 1K OHM J
R432	24376274	CARBON FILM, 1/2W 270K OHM J
R433	24376274	CARBON FILM, 1/2W 270K OHM J
R433	24366681	CARBON FILM, 1/6W 680 OHM J
R434	24376274	CARBON FILM, 1/2W 270K OHM J
R434	24366472	CARBON FILM, 1/6W 4.7K OHM J
R435	24366332	CARBON FILM, 1/6W 3.3K OHM J
R436	24366473	CARBON FILM, 1/6W 47K OHM J
R437	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R438	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R439	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R440	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R441	24533331	FUSIBLE, 2W 330 OHM J
R443	24310109	OXIDE METAL FILM, 1/2W 1 OHM J
R444	24322398	OXIDE METAL FILM, 1W 0.39 OHM J
R446	24366103	CARBON FILM, 1/6W 10K OHM J
R447	24382473	OXIDE METAL FILM, 1W 47K OHM J
R448	24366562	CARBON FILM, 1/6W 5.6K OHM J
R449	24366152	CARBON FILM, 1/6W 1.5K OHM J
R466	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
R467	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R469	24366101	CARBON FILM, 1/6W 100 OHM J
R470	24366224	CARBON FILM, 1/6W 220K OHM J
R472	24366101	CARBON FILM, 1/6W 100 OHM J
R473	24366223	CARBON FILM, 1/6W 22K OHM J
R474	24376393	CARBON FILM, 1/2W 39K OHM J
R475	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R476	24366471	CARBON FILM, 1/6W 470 OHM J
R477	24366102	CARBON FILM, 1/6W 1K OHM J
⚠ R477	24000141	METAL FILM, 1/4W 220 OHM F
R480	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R481	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R481	24322478	OXIDE METAL FILM, 1W 0.47 OHM J
R482	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R482	24552271	OXIDE METAL FILM, 1/2W 270 OHM J
R483	24552151	OXIDE METAL FILM, 1/2W 150 OHM J
R484	24366102	CARBON FILM, 1/6W 1K OHM J
R490	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R491	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
⚠ R492	24000360	METAL FILM, 1/4W 1.2K OHM F
⚠ R493	24000141	METAL FILM, 1/4W 220 OHM F
⚠ R494	24000141	METAL FILM, 1/4W 220 OHM F
R495	24366333	CARBON FILM, 1/6W 33K OHM J
R496	24366103	CARBON FILM, 1/6W 10K OHM J
R497	24366100	CARBON FILM, 1/6W 10 OHM J
R498	24366103	CARBON FILM, 1/6W 10K OHM J
R499	24366102	CARBON FILM, 1/6W 1K OHM J
R513	24366101	CARBON FILM, 1/6W 100 OHM J
R513	24000445	CHIP JUMPER, 1608TYPE
R515	24366103	CARBON FILM, 1/6W 10K OHM J
R520	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
R521	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R522	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R523	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R524	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R525	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R526	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R527	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R528	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R531	24011103	CHIP, METAL FILM, 1/20W 10K OHM J

Location No.	Parts No.	Description
R537	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R538	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R539	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
R541	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R542	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R543	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R544	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R545	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R546	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R547	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
R548	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
R549	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R553	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
R560	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R561	24552181	OXIDE METAL FILM, 1/2W 180 OHM J
R562	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R563	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R564	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R565	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R566	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R567	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R568	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R569	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
R601	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R602	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R603	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
R604	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
R609	24366229	CARBON FILM, 1/6W 2.2 OHM J
R610	24366229	CARBON FILM, 1/6W 2.2 OHM J
R613	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R661	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R662	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R663	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R665	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R666	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R667	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R668	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R671	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R672	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R673	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R674	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R682	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R683	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R684	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R687	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R688	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
R689	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R690	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R691	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R692	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R693	24000445	CHIP JUMPER, 1608TYPE
R702	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R709	24366563	CARBON FILM, 1/6W 56K OHM J
R713	24366273	CARBON FILM, 1/6W 27K OHM J
R715	24366273	CARBON FILM, 1/6W 27K OHM J (51H83)
R715	24366333	CARBON FILM, 1/6W 33K OHM J (57H83/65H83)
R716	24366273	CARBON FILM, 1/6W 27K OHM J
R717	24366333	CARBON FILM, 1/6W 33K OHM J
R718	24366101	CARBON FILM, 1/6W 100 OHM J
R719	24366100	CARBON FILM, 1/6W 10 OHM J
R720	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R721	24546919	FUSIBLE, 1/2W 9.1 OHM J
R722	24546919	FUSIBLE, 1/2W 9.1 OHM J
R722	24552471	OXIDE METAL FILM, 1/2W 470 OHM J

Location No.	Parts No.	Description
R723	24366101	CARBON FILM, 1/6W 100 OHM J
R723	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R724	24366151	CARBON FILM, 1/6W 150 OHM J
R724	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R725	24366222	CARBON FILM, 1/6W 2.2K OHM J (51H83)
R725	24366332	CARBON FILM, 1/6W 3.3K OHM J (57H83/65H83)
R730	24552100	OXIDE METAL FILM, 1/2W 10 OHM J
R731	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R732	24366470	CARBON FILM, 1/6W 47 OHM J
R733	24366683	CARBON FILM, 1/6W 68K OHM J
R734	24366470	CARBON FILM, 1/6W 47 OHM J
R735	24366683	CARBON FILM, 1/6W 68K OHM J
R736	24553330	OXIDE METAL FILM, 1W 33 OHM J
R737	24366751	CARBON FILM, 1/6W 750 OHM J
R738	24366102	CARBON FILM, 1/6W 1K OHM J
R739	24366751	CARBON FILM, 1/6W 750 OHM J
R740	24553330	OXIDE METAL FILM, 1W 33 OHM J
R741	24322229	OXIDE METAL FILM, 1W 2.2 OHM J
R742	24322229	OXIDE METAL FILM, 1W 2.2 OHM J (51H83)
R742	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J (57H83/65H83)
R743	24554221	OXIDE METAL FILM, 2W 220 OHM J
R744	24366122	CARBON FILM, 1/6W 1.2K OHM J
R745	24366122	CARBON FILM, 1/6W 1.2K OHM J
R761	24366273	CARBON FILM, 1/6W 27K OHM J
R762	24366563	CARBON FILM, 1/6W 56K OHM J
R763	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R764	24366470	CARBON FILM, 1/6W 47 OHM J
R765	24552100	OXIDE METAL FILM, 1/2W 10 OHM J
R766	24366470	CARBON FILM, 1/6W 47 OHM J
R767	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R768	24366751	CARBON FILM, 1/6W 750 OHM J
R769	24366122	CARBON FILM, 1/6W 1.2K OHM J
R770	24553330	OXIDE METAL FILM, 1W 33 OHM J
R771	24322229	OXIDE METAL FILM, 1W 2.2 OHM J
R772	24366683	CARBON FILM, 1/6W 68K OHM J
R773	24366683	CARBON FILM, 1/6W 68K OHM J
R774	24366751	CARBON FILM, 1/6W 750 OHM J
R775	24366122	CARBON FILM, 1/6W 1.2K OHM J
R776	24553330	OXIDE METAL FILM, 1W 33 OHM J
R777	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J
R778	24366102	CARBON FILM, 1/6W 1K OHM J
R779	24554221	OXIDE METAL FILM, 2W 220 OHM J
R781	24366273	CARBON FILM, 1/6W 27K OHM J
R782	24366563	CARBON FILM, 1/6W 56K OHM J
R783	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R784	24552100	OXIDE METAL FILM, 1/2W 10 OHM J
R785	24366470	CARBON FILM, 1/6W 47 OHM J
R786	24366751	CARBON FILM, 1/6W 750 OHM J
R787	24366122	CARBON FILM, 1/6W 1.2K OHM J
R788	24366683	CARBON FILM, 1/6W 68K OHM J
R789	24366683	CARBON FILM, 1/6W 68K OHM J
R790	24366751	CARBON FILM, 1/6W 750 OHM J
R791	24366122	CARBON FILM, 1/6W 1.2K OHM J
R792	24366102	CARBON FILM, 1/6W 1K OHM J
R793	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J
R794	24553330	OXIDE METAL FILM, 1W 33 OHM J
R795	24322229	OXIDE METAL FILM, 1W 2.2 OHM J
R796	24554221	OXIDE METAL FILM, 2W 220 OHM J
R797	24366470	CARBON FILM, 1/6W 47 OHM J
R798	24552331	OXIDE METAL FILM, 1/2W 330 OHM J
R799	24553330	OXIDE METAL FILM, 1W 33 OHM J
R810	24007061	CERAMIC COVERED, 2W 1.8 OHM K
R818	24366102	CARBON FILM, 1/6W 1K OHM J

Location No.	Parts No.	Description
R819	24366103	CARBON FILM, 1/6W 10K OHM J
R834	24000147	METAL FILM, 1/4W 470 OHM F
R835	24000219	METAL FILM, 1/4W 10 F
R836	24366102	CARBON FILM, 1/6W 1K OHM J
R840	24552562	OXIDE METAL FILM, 1/2W 5.6K OHM J
R841	24366102	CARBON FILM, 1/6W 1K OHM J
R842	24376563	CARB0N FILM, 1/2W 56K OHM J
R843	24376563	CARB0N FILM, 1/2W 56K OHM J
R844	24366103	CARBON FILM, 1/6W 10K OHM J
R849	24366101	CARBON FILM, 1/6W 100 OHM J
R860	24383153	OXIDE METAL FILM, 2W 15K OHM J
R861	24383153	OXIDE METAL FILM, 2W 15K OHM J
R862	24321689	OXIDE METAL FILM, 1/2W 6.8 OHM J
R864	24552102	OXIDE METAL FILM, 1/2W 1K OHM J
R865	24552390	OXIDE METAL FILM, 1/2W 39 OHM J
R866	24366472	CARBON FILM, 1/6W 4.7K OHM J
R867	24366223	CARBON FILM, 1/6W 22K OHM J
R868	24552470	OXIDE METAL FILM, 1/2W 47 OHM J
R870	24381151	OXIDE METAL FILM, 1/2W 150 OHM J
R871	24382680	OXIDE METAL FILM, 1W 68 OHM J
R873	24552100	OXIDE METAL FILM, 1/2W 10 OHM J
R874	24366150	CARBON FILM, 1/6W 15 OHM J
R881	24366152	CARBON FILM, 1/6W 1.5K OHM J
R882	24366101	CARBON FILM, 1/6W 100 OHM J
R883	24381682	OXIDE METAL FILM, 1/2W 6.8K OHM J
R885	24366102	CARBON FILM, 1/6W 1K OHM J
R886	24366332	CARBON FILM, 1/6W 3.3K OHM J
R893	24366472	CARBON FILM, 1/6W 4.7K OHM J
R894	24366103	CARBON FILM, 1/6W 10K OHM J
⚠ R899	24010001	CARBON FILM, 1/2W 3.9M OHM J
R900	24000892	FUSIBLE, 1W 1.2 OHM J
R901	24366101	CARBON FILM, 1/6W 100 OHM J (51H83)
R901	24366331	CARBON FILM, 1/6W 330 OHM J (57H83/65H83)
R903	24942102	CARBON COMPOSITION, 1/2W 1K OHM J (51H83)
R903	24552101	OXIDE METAL FILM, 1/2W 100 OHM J (57H83/65H83)
R904	24366222	CARBON FILM, 1/6W 2.2K OHM J (51H83)
R905	24366330	CARBON FILM, 1/6W 33 OHM J (51H83)
R905	24366270	CARBON FILM, 1/6W 27 OHM J (57H83/65H83)
R906	24366331	CARBON FILM, 1/6W 330 OHM J (51H83)
R906	24366271	CARBON FILM, 1/6W 270 OHM J (57H83/65H83)
R908	24366150	CARBON FILM, 1/6W 15 OHM J (51H83)
R908	24366680	CARBON FILM, 1/6W 68 OHM J (57H83/65H83)
R909	24366330	CARBON FILM, 1/6W 33 OHM J (51H83)
R909	24366180	CARBON FILM, 1/6W 18 OHM J (57H83/65H83)
R910	24322568	OXIDE METAL FILM, 1W 0.56 OHM J
R911	24366101	CARBON FILM, 1/6W 100 OHM J (51H83)
R911	24366331	CARBON FILM, 1/6W 330 OHM J (57H83/65H83)
R913	24942102	CARBON COMPOSITION, 1/2W 1K OHM J (51H83)
R913	24552101	OXIDE METAL FILM, 1/2W 100 OHM J (57H83/65H83)
R914	24366222	CARBON FILM, 1/6W 2.2K OHM J (51H83)
R915	24366270	CARBON FILM, 1/6W 27 OHM J
R916	24366331	CARBON FILM, 1/6W 330 OHM J (51H83)
R916	24366271	CARBON FILM, 1/6W 270 OHM J (57H83/65H83)
R918	24366100	CARBON FILM, 1/6W 10 OHM J (51H83)
R918	24366680	CARBON FILM, 1/6W 68 OHM J (57H83/65H83)
R919	24366270	CARBON FILM, 1/6W 27 OHM J (51H83)
R919	24366180	CARBON FILM, 1/6W 18 OHM J (57H83/65H83)

Location No.	Parts No.	Description
R920	24366562	CARBON FILM, 1/6W 5.6K OHM J (51H83/65H83)
R920	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83)
R921	24366101	CARBON FILM, 1/6W 100 OHM J (51H83)
R921	24366331	CARBON FILM, 1/6W 330 OHM J (57H83/65H83)
R923	24942102	CARBON COMPOSITION, 1/2W 1K OHM J (51H83)
R923	24552101	OXIDE METAL FILM, 1/2W 100 OHM J (57H83/65H83)
R924	24366222	CARBON FILM, 1/6W 2.2K OHM J (51H83)
R925	24366390	CARBON FILM, 1/6W 39 OHM J (51H83)
R925	24366180	CARBON FILM, 1/6W 18 OHM J (57H83/65H83)
R926	24366331	CARBON FILM, 1/6W 330 OHM J (51H83)
R926	24366271	CARBON FILM, 1/6W 270 OHM J (57H83/65H83)
R927	24366100	CARBON FILM, 1/6W 10 OHM J
R928	24366100	CARBON FILM, 1/6W 10 OHM J (51H83)
R928	24366680	CARBON FILM, 1/6W 68 OHM J (57H83/65H83)
R929	24366330	CARBON FILM, 1/6W 33 OHM J (51H83)
R929	24366270	CARBON FILM, 1/6W 27 OHM J (57H83/65H83)
R930	24366153	CARBON FILM, 1/6W 15K OHM J (51H83)
R930	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83/65H83)
R931	24383153	OXIDE METAL FILM, 2W 15K OHM J
R932	24383153	OXIDE METAL FILM, 2W 15K OHM J
R934	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R935	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R936	24383153	OXIDE METAL FILM, 2W 15K OHM J
R937	24383153	OXIDE METAL FILM, 2W 15K OHM J
R938	24366150	CARBON FILM, 1/6W 15 OHM J
R941	24383153	OXIDE METAL FILM, 2W 15K OHM J
R942	24383153	OXIDE METAL FILM, 2W 15K OHM J
R943	24383153	OXIDE METAL FILM, 2W 15K OHM J (51H83)
R944	24383153	OXIDE METAL FILM, 2W 15K OHM J
R945	24366150	CARBON FILM, 1/6W 15 OHM J
R946	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R947	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R948	24366562	CARBON FILM, 1/6W 5.6K OHM J (51H83)
R948	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83)
R949	24366153	CARBON FILM, 1/6W 15K OHM J (51H83)
R949	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R950	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83/65H83)
R951	24383153	OXIDE METAL FILM, 2W 15K OHM J
R952	24383153	OXIDE METAL FILM, 2W 15K OHM J
R953	24383153	OXIDE METAL FILM, 2W 15K OHM J (51H83)
R954	24383153	OXIDE METAL FILM, 2W 15K OHM J
R955	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R956	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R957	24383153	OXIDE METAL FILM, 2W 15K OHM J (57H83/65H83)
R958	24366150	CARBON FILM, 1/6W 15 OHM J (57H83/65H83)
R959	24366150	CARBON FILM, 1/6W 15 OHM J (51H83)
R961	24366152	CARBON FILM, 1/6W 1.5K OHM J (51H83)
R961	24366122	CARBON FILM, 1/6W 1.2K OHM J (57H83/65H83)
R962	24366102	CARBON FILM, 1/6W 1K OHM J (51H83)

Location No.	Parts No.	Description
R962	24366471	CARBON FILM, 1/6W 470 OHM J (57H83/65H83)
R963	24366100	CARBON FILM, 1/6W 10 OHM J
R964	24366332	CARBON FILM, 1/6W 3.3K OHM J
R965	24366471	CARBON FILM, 1/6W 470 OHM J (51H83)
R965	24366101	CARBON FILM, 1/6W 100 OHM J (57H83/65H83)
R966	24366331	CARBON FILM, 1/6W 330 OHM J
R967	24366681	CARBON FILM, 1/6W 680 OHM J
R968	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83/65H83)
R978	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83/65H83)
R987	24366470	CARBON FILM, 1/6W 47 OHM J (51H83)
R987	24366101	CARBON FILM, 1/6W 100 OHM J (57H83/65H83)
R988	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83/65H83)
R991	24366562	CARBON FILM, 1/6W 5.6K OHM J (51H83/65H83)
R991	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83)
R992	24366153	CARBON FILM, 1/6W 15K OHM J (51H83)
R992	24366222	CARBON FILM, 1/6W 2.2K OHM J (57H83/65H83)
R995	24366100	CARBON FILM, 1/6W 10 OHM J (51H83)
R995	24366330	CARBON FILM, 1/6W 33 OHM J (57H83/65H83)
R2020	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2030	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
R2040	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2060	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R2104	24011302	CHIP, METAL FILM, 1/20W 3K OHM J
R2105	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2106	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2107	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2108	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R2109	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R2110	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R2111	24011560	CHIP, METAL FILM, 1/20W 56 OHM J
R2112	24011560	CHIP, METAL FILM, 1/20W 56 OHM J
R2113	24011560	CHIP, METAL FILM, 1/20W 56 OHM J
R2149	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R2150	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R2151	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R2152	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2153	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2154	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R2155	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R2156	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R2157	24871102	CHIP, METAL FILM, 1/8W 1K OHM J
R2158	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R2159	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R2160	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R2161	24871472	CHIP, METAL FILM, 1/8W 4.7K OHM J
R2162	24871562	CHIP, METAL FILM, 1/8W 5.6K OHM J
R2163	24011121	CHIP, METAL FILM, 1/20W 120 OHM J
R2164	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
R2165	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
R2166	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
R2167	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
R2168	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
R4401	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R4403	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R4405	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4406	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R4407	24011221	CHIP, METAL FILM, 1/20W 220 OHM J

Location No.	Parts No.	Description
R4409	24871472	CHIP, METAL FILM, 1/8W 4.7K OHM J
R4411	24000445	CHIP JUMPER, 1608TYPE
R4412	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R4413	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
R4430	24381150	OXIDE METAL FILM, 1/2W 15 OHM J
R4431	24366102	CARBON FILM, 1/6W 1K OHM J
R4605	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
R5020	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R5030	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7701	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
R7707	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7708	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7710	24384221	OXIDE METAL FILM, 3W 220 OHM J
R7711	24547189	FUSIBLE, 1W 1.8 OHM J
R7712	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7713	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7715	24384221	OXIDE METAL FILM, 3W 220 OHM J
R7716	24547189	FUSIBLE, 1W 1.8 OHM J
R7717	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7718	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7720	24384221	OXIDE METAL FILM, 3W 220 OHM J
R7721	24547189	FUSIBLE, 1W 1.8 OHM J
R7722	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7723	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7725	24384221	OXIDE METAL FILM, 3W 220 OHM J
R7726	24547189	FUSIBLE, 1W 1.8 OHM J
R7727	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7728	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7730	24384221	OXIDE METAL FILM, 3W 220 OHM J
R7731	24547189	FUSIBLE, 1W 1.8 OHM J
R7732	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7733	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7735	24384221	OXIDE METAL FILM, 3W 220 OHM J
R7736	24547189	FUSIBLE, 1W 1.8 OHM J
R7767	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
R7775	24366221	CARBON FILM, 1/6W 220 OHM J
R7776	24011823	CHIP, METAL FILM, 1/20W 82K OHM J
R7777	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R7778	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R7779	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R7781	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R7786	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7788	24366221	CARBON FILM, 1/6W 220 OHM J
R7790	KETSU	
R7799	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7836	24366472	CARBON FILM, 1/6W 4.7K OHM J
R7837	24366100	CARBON FILM, 1/6W 10 OHM J
R7841	24366101	CARBON FILM, 1/6W 100 OHM J
R7842	24366472	CARBON FILM, 1/6W 4.7K OHM J
R7843	24366471	CARBON FILM, 1/6W 470 OHM J
R7844	24366472	CARBON FILM, 1/6W 4.7K OHM J
R7845	24366471	CARBON FILM, 1/6W 470 OHM J
R7846	24366103	CARBON FILM, 1/6W 10K OHM J
R7847	24366103	CARBON FILM, 1/6W 10K OHM J
R7848	24366222	CARBON FILM, 1/6W 2.2K OHM J
R7861	24366472	CARBON FILM, 1/6W 4.7K OHM J
R7862	24366222	CARBON FILM, 1/6W 2.2K OHM J
R7864	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7866	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R7868	24011752	CHIP, METAL FILM, 1/20W 7.5K OHM J
R7872	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7880	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
R7881	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7882	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R7883	24011103	CHIP, METAL FILM, 1/20W 10K OHM J

Location No.	Parts No.	Description
R7890	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
R7891	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
R7903	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7904	24000203	METAL FILM, 1/4W 27K OHM F
R7906	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R7907	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R7908	24366222	CARBON FILM, 1/6W 2.2K OHM J
R7909	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R7910	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
R7911	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
R7912	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
R7913	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
R7914	24381182	OXIDE METAL FILM, 1/2W 1.8K OHM J
R7921	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7922	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7923	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7930	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R7931	KETSU	
R7932	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R7940	KETSU	
R7941	KETSU	
R7942	24011472	CHIP, METAL FILM, 1/16W 4.7K OHM J
R7943	24011472	CHIP, METAL FILM, 1/16W 4.7K OHM J
R9501	24366470	CARBON FILM, 1/6W 47 OHM J (51H83)
R9501	24366101	CARBON FILM, 1/6W 100 OHM J (57H83/65H83)
R9503	24366681	CARBON FILM, 1/6W 680 OHM J
R9507	24366220	CARBON FILM, 1/6W 22 OHM J (51H83)
R9507	24366330	CARBON FILM, 1/6W 33 OHM J (57H83/65H83)
R9607	24366470	CARBON FILM, 1/6W 47 OHM J (51H83)
R9607	24366101	CARBON FILM, 1/6W 100 OHM J (57H83/65H83)
R9608	24366681	CARBON FILM, 1/6W 680 OHM J
R9620	24366100	CARBON FILM, 1/6W 10 OHM J (51H83)
R9620	24366330	CARBON FILM, 1/6W 33 OHM J (57H83/65H83)
RA01	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA02	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA04	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA05	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA06	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA07	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA08	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA09	24011333	CHIP, METAL FILM, 1/16W 33K OHM J
RA10	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA12	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA13	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA14	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA15	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA16	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA20	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA24	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RA26	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA28	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA30	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA32	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RA35	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RA36	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA37	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA38	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA39	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA40	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA41	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA42	24011151	CHIP, METAL FILM, 1/20W 150 OHM J

Location No.	Parts No.	Description
RA43	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA44	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA45	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA46	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA49	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA50	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA51	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA52	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA53	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA54	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA55	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA59	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA60	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA71	24366273	CARBON FILM, 1/6W 27K OHM J
RA72	24366153	CARBON FILM, 1/6W 15K OHM J
RA72	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RA73	24366822	CARBON FILM, 1/6W 8.2K OHM J
RA73	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RA74	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RA75	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RA76	24366822	CARBON FILM, 1/6W 8.2K OHM J
RA76	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA77	24366153	CARBON FILM, 1/6W 15K OHM J
RA77	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA78	24366273	CARBON FILM, 1/6W 27K OHM J
RA78	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA79	24366823	CARBON FILM, 1/6W 82K OHM J
RA79	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA80	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA81	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RA021	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA031	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA091	24011683	CHIP, METAL FILM, 1/20W 68K OHM J
RA141	24011683	CHIP, METAL FILM, 1/20W 68K OHM J
RA161	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA241	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RA361	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA374	24000445	CHIP JUMPER, 1608TYPE
RA384	24000445	CHIP JUMPER, 1608TYPE
RA394	24000445	CHIP JUMPER, 1608TYPE
RA401	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RA431	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA703	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA705	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RA708	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RB01	24366391	CARBON FILM, 1/6W 390 OHM J
RB03	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RB04	24366473	CARBON FILM, 1/6W 47K OHM J
RB05	24366102	CARBON FILM, 1/6W 1K OHM J
RB05	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB14	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RB15	24366471	CARBON FILM, 1/6W 470 OHM J
RB15	24011153	CHIP, METAL FILM, 1/2OW 15K OHM J
RB16	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RB17	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RB19	24366470	CARBON FILM, 1/6W 47 OHM J
RB37	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RB38	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RB39	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB40	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB41	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB42	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB43	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RB44	24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RB45	24011123	CHIP, METAL FILM, 1/20W 12K OHM J

Location No.	Parts No.	Description
RB46	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB47	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB48	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB61	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RB62	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB64	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RB65	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB81	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
RB82	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB83	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RB84	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RB90	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RB91	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RB92	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RB93	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RB94	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RB95	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RB96	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
RB97	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
RB98	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB031	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RB032	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RB033	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RB051	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB052	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RB512	24011100	CHIP, METAL FILM, 1/20W 10 OHM J
RB551	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB552	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB553	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RC01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC02	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC04	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC05	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC06	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC07	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC08	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RC09	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RC10	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RI01	24011270	CHIP, METAL FILM, 1/20W 27 OHM J
RI02	24011512	CHIP, METAL FILM, 1/20W 5.1K OHM J
RI03	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI04	24011470	CHIP, METAL FILM, 1/20W 47 OHM J
RI05	24011361	CHIP, METAL FILM, 1/20W 360 OHM J
RI06	24011519	METAL FILM CHIP, 1/16W 5.1 J
RI07	24011360	METAL FILM CHIP, 1/20W 36 J
RI08	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RI09	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RI11	24011113	CHIP, METAL FILM, 1/20W 11K OHM J
RI13	24011112	CHIP, METAL FILM, 1/20W 1.1K OHM J
RI14	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI15	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RI16	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
RI17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RI18	24011132	CHIP, METAL FILM, 1/20W 1.3K OHM J
RI19	24011391	CHIP, METAL FILM, 1/20W 390 OHM J
RI20	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
RI21	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RI22	24011475	METAL FILM CHIP, 1/16W 4R7M K
RI23	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RI27	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RI28	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RI30	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI32	24366750	CARBON FILM, 1/6W 75 OHM J
RI33	24011124	CHIP, METAL FILM, 1/20W 120K OHM J

Location No.	Parts No.	Description
RI35	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RI36	24011683	CHIP, METAL FILM, 1/20W 68K OHM J
RI51	24066046	VARIABLE. CARBON, 0.1W 20K N
RI52	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RJ41	24000445	CHIP JUMPER, 1608TYPE
RJ42	24000445	CHIP JUMPER, 1608TYPE
RJ43	24000445	CHIP JUMPER, 1608TYPE
RJ44	24000445	CHIP JUMPER, 1608TYPE
RJ45	24000445	CHIP JUMPER, 1608TYPE
RJ46	24000445	CHIP JUMPER, 1608TYPE
RJ47	24000445	CHIP JUMPER, 1608TYPE
RR52	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RR53	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RR54	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RR55	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RR56	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RR57	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RR61	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RR62	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RR63	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS01	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS02	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS03	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS04	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS05	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS06	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS07	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS08	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS09	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS10	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS11	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS12	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS13	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS14	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS15	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS16	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS18	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS19	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS20	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS21	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS22	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS25	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS26	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS29	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS30	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS31	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS32	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS33	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RS34	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RS35	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS37	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS38	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS39	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS40	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS41	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS42	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS44	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS45	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS46	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS47	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS48	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS49	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS50	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RS51	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J

Location No.	Parts No.	Description
RS52	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS55	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS56	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS57	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS58	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS59	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS60	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS61	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS62	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS63	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS64	24011393	CHIP, METAL FILM, 1/20W 39K OHM J
RS65	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RS66	24011393	CHIP, METAL FILM, 1/20W 39K OHM J
RS67	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RS120	24554561	OXIDE METAL FILM, 2W 560 OHM J
RS121	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS122	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS123	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS124	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS125	24000445	CHIP JUMPER, 1608TYPE
RS126	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RV01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV06	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV07	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV08	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV09	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV10	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV11	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV12	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV14	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RV15	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV17	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV19	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV20	24366750	CARBON FILM, 1/6W 75 OHM J
RV20	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV21	24366750	CARBON FILM, 1/6W 75 OHM J
RV21	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV22	24366750	CARBON FILM, 1/6W 75 OHM J
RV23	24366332	CARBON FILM, 1/6W 3.3K OHM J
RV26	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RV27	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV29	24552101	OXIDE METAL FILM, 1/2W 100 OHM J
RV30	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV33	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV34	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV35	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV36	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV37	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV38	24872184	CHIP, METAL FILM, 1/16W 180K OHM J
RV39	24872334	CHIP, METAL FILM, 1/16W 330K OHM J
RV40	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV41	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV60	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV61	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV62	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV66	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV70	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV71	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV72	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV73	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV74	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV75	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV76	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J
RV77	24011101	CHIP, METAL FILM, 1/20W 100 OHM J

Location No.	Parts No.	Description
RV78	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV79	24011272	CHIP, METAL FILM, 1/20W 2.7K OHM J
RV82	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RV85	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV86	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RV323	24872101	CHIP, METAL FILM, 1/16W 100 OHM J
RV324	24872101	CHIP, METAL FILM, 1/16W 100 OHM J
RV325	24872101	CHIP, METAL FILM, 1/16W 100 OHM J
RV330	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV331	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV332	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV337	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV338	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV346	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV347	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV348	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV351	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RV352	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RV353	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RV354	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RV355	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RV356	24011330	CHIP, METAL FILM, 1/20W 33 OHM J
RY101	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY102	24011221	CHIP, METAL FILM, 1/20W 220 OHM J
RY103	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY104	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY105	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
RY106	24000445	CHIP JUMPER, 1608TYPE
RY107	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY109	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RY110	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY501	24011303	CHIP, METAL FILM, 1/20W 30K OHM J
RY502	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY503	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RY504	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY505	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RY507	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY508	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY509	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY510	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY511	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY512	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY513	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY516	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY517	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY518	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY519	24000445	CHIP JUMPER, 1608TYPE
RY520	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY521	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY523	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RY524	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RY525	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY526	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY527	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY528	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RY529	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY532	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY533	24000445	CHIP JUMPER, 1608TYPE
RY534	24000445	CHIP JUMPER, 1608TYPE
RY541	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RY542	24011392	CHIP, METAL FILM, 1/20W 3.9K OHM J
RY543	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY545	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY548	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RY550	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J

Location No.	Parts No.	Description
RY551	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
RY552	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
RY560	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RY561	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RY562	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RY573	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RY575	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY576	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RY585	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RY590	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
COILS & TRANSFORMERS		
L101	23289845	COIL, PEAKING, TRF4680AT
L103	23289844	COIL, PEAKING, TRF4470AT
L111	23289845	COIL, PEAKING, TRF4680AT
L113	23289842	COIL, PEAKING, TRF4220AT
L115	23103852	COIL, FILTER, TEM2028AH
L121	23238562	COIL, PEAKING, TRF4109AJ
L122	23238562	COIL, PEAKING, TRF4109AJ
L302	23248073	COIL, CHOKE, TLN3299D
L303	23248073	COIL, CHOKE, TLN3299D
L304	23103145	FERRITE CHOKE, TEM2011AA
L305	23103248	FERRITR CHOKE, TEM2014AA
L310	23289846	COIL, PEAKING, TRF4101AT
L401	23289560	COIL, PEAKING, TRF4560AF
⚠ L402	23248345	COIL, CHOKE EI24 120MMH, TLN3534AH
L403	23103145	FERRITE CHOKE, TEM2011AA
L406	23248191	COIL, CHOKE, TLN3351AD
L407	23103248	FERRITR CHOKE, TEM2014AA
L408	23103248	FERRITR CHOKE, TEM2014AA
⚠ L441	23233056	COIL, LINEARITY, TLN2222AG
⚠ L462	23231372	DEFLECTION YOKE, TDY707QD
⚠ L463	23231372	DEFLECTION YOKE, TDY707QD
⚠ L464	23231372	DEFLECTION YOKE, TDY707QD
L472	23102457	VM COIL, 29.1VM4T3PLEAD, MAG-1102
L473	23102457	VM COIL, 29.1VM4T3PLEAD, MAG-1102
L474	23102457	VM COIL, 29.1VM4T3PLEAD, MAG-1102
L501	23289844	COIL, PEAKING, TRF4470AT
L503	23280022	COIL, PEAKING, TRF4101AZ
L701	23237987	COIL, PEAKING, TRF4100AC
L702	23261974	COIL, FERRITE BEAD, HC5-035
L704	23103145	FERRITE CHOKE, TEM2011AA
L705	23103145	FERRITE CHOKE, TEM2011AA
L762	23103145	FERRITE CHOKE, TEM2011AA (57H83/65H83)
L764	23103145	FERRITE CHOKE, TEM2011AA
L765	23103145	FERRITE CHOKE, TEM2011AA
L766	23261974	COIL, FERRITE BEAD, HC5-035
L769	23237987	COIL, PEAKING, TRF4100AC
L780	23237987	COIL, PEAKING, TRF4100AC
L781	23103145	FERRITE CHOKE, TEM2011AA
L782	23103145	FERRITE CHOKE, TEM2011AA
L783	23261974	COIL, FERRITE BEAD, HC5-035
L805	23248213	COIL, CHOKE, TLN3481AH
L806	23248213	COIL, CHOKE, TLN3481AH
L830	23280019	COIL, PEAKING, TRF4330AZ
L831	23103941	COIL, CHOKE, TEM2011
L832	23248257	COIL, CHOKE, TLN3503AH
L833	23248247	COIL, CHOKE, TLN3499AH
L840	23280019	COIL, PEAKING, TRF4330AZ
L850	23103145	FERRITE CHOKE, TEM2011AA
L851	23103145	FERRITE CHOKE, TEM2011AA
L852	23103145	FERRITE CHOKE, TEM2011AA
L861	23103145	FERRITE CHOKE, TEM2011AA
L862	23103145	FERRITE CHOKE, TEM2011AA
L864	23103145	FERRITE CHOKE, TEM2011AA

Location No.	Parts No.	Description
L880	23103145	FERRITE CHOKE, TEM2011AA
L881	23103145	FERRITE CHOKE, TEM2011AA
L882	23103145	FERRITE CHOKE, TEM2011AA
L883	23103145	FERRITE CHOKE, TEM2011AA
L885	23248073	COIL, CHOKE, TLN3299D
L888	23248247	COIL, CHOKE, TLN3499AH
L889	23248247	COIL, CHOKE, TLN3499AH
L891	23103145	FERRITE CHOKE, TEM2011AA
L892	23103145	FERRITE CHOKE, TEM2011AA
L893	23248247	COIL, CHOKE, TLN3499AH
L894	23248247	COIL, CHOKE, TLN3499AH
L895	23103145	FERRITE CHOKE, TEM2011AA
L896	23103145	FERRITE CHOKE, TEM2011AA
L902	23289100	COIL, PEAKING, TRF4100AF (51H83)
L902	23289159	COIL, PEAKING, TRF41R5AF (57H83/65H83)
L903	23289101	COIL, PEAKING, TRF4101AF (51H83)
L904	23289120	COIL, PEAKING, TRF4120AF (57H83/65H83)
L905	23289689	COIL, PEAKING, TRF46R8AF (57H83/65H83)
L907	23289229	COIL, PEAKING, TRF4229AF
L911	23237987	COIL, PEAKING, TRF4100AC (51H83)
L911	23289100	COIL, PEAKING, TRF4100AF (57H83/65H83)
L912	23289101	COIL, PEAKING, TRF4101AF (51H83)
L913	23289100	COIL, PEAKING, TRF4100AF (51H83)
L913	23289159	COIL, PEAKING, TRF41R5AF (57H83/65H83)
L915	23289689	COIL, PEAKING, TRF46R8AF (57H83/65H83)
L916	23289120	COIL, PEAKING, TRF4120AF (57H83/65H83)
L917	23289229	COIL, PEAKING, TRF4229AF
L922	23289101	COIL, PEAKING, TRF4101AF (51H83)
L923	23289150	COIL, PEAKING, TRF4150AF (51H83)
L923	23289159	COIL, PEAKING, TRF41R5AF (57H83/65H83)
L924	23289120	COIL, PEAKING, TRF4120AF (57H83/65H83)
L925	23289689	COIL, PEAKING, TRF46R8AF (57H83/65H83)
L927	23289229	COIL, PEAKING, TRF4229AF
L961	23238714	COIL, PEAKING, TRF4100AJ (51H83)
L961	23289100	COIL, PEAKING, TRF4100AF (57H83/65H83)
L4401	23289220	COIL, PEAKING, TRF4220AF
L7708	23103145	FERRITE CHOKE, TEM2011AA
L7709	23103145	FERRITE CHOKE, TEM2011AA
L7710	23248320	COIL, CHOKE 15X23H 100MMH 2.5A, TLN3441AH
L7711	23248320	COIL, CHOKE 15X23H 100MMH 2.5A, TLN3441AH
L7712	23248031	COIL, CHOKE, TLN3274D
L7713	23248031	COIL, CHOKE, TLN3274D
LA37	23289836	COIL, PEAKING, TRF42R2AT
LA38	23289836	COIL, PEAKING, TRF42R2AT
LA39	23289836	COIL, PEAKING, TRF42R2AT
LI01	23246051	COIL, CHIP-INDUCTOR-0.22MMH K, COLTRF4R22CE
LI02	23246104	CHIP INDUCTOR, TRFR5C
LI51	23289470	COIL, PEAKING, TRF4470AF
LI52	23289120	COIL, PEAKING, TRF4120AF
LI53	23289180	COIL, PEAKING, TRF4180AF
LI54	23232050	COIL, VARIABLE, TRF3554D
LI55	23289129	COIL, PEAKING 1.0MMH J 0405, TRF41R2AF
LI56	23289180	COIL, PEAKING, TRF4180AF
LI57	23289228	COIL, PEAKING, TRF4R22AF
LV01	23103159	FILTER, EMI, TEM2028AA, 7.5X6.4X8 60MMH 0.5A
LV02	23103159	FILTER, EMI, TEM2028AA, 7.5X6.4X8 60MMH 0.5A
LV03	23103159	FILTER, EMI, TEM2028AA, 7.5X6.4X8 60MMH 0.5A
LV09	23289840	COIL, PEAKING, TRF4100AT
LV13	23289840	COIL, PEAKING, TRF4100AT

Location No.	Parts No.	Description
LV20	23238705	COIL, PEAKING, TRF4560AJ
LV42	23289840	COIL, PEAKING, TRF4100AT
LV72	23103159	FILTER, EMI, TEM2028AA, 7.5X6.4X8 60MMH 0.5A
LV251	23103852	COIL, FILTER, TEM2028AH
LV252	23103852	COIL, FILTER, TEM2028AH
LV253	23103852	COIL, FILTER, TEM2028AH
LV270	23289840	COIL, PEAKING, TRF4100AT
LV271	23103146	EMI FILTER, TEM2030AA
LY101	23103827	INDUCTOR, BEAD, TEM2120M
LY102	23103827	INDUCTOR, BEAD, TEM2120M
LY105	23246222	COIL, CHIP INDUCTOR, TRF4270CG
T400	23224386	TRANSFORMER, FOCUS, TLN2220AH
T401	23224371	TRANSFORMER, HORIZ DRIVE, TLN1080AH
⚠ T461	23236742	TRANSFORMER, FLYBACK, TFB3092AD
T461A	23192972	ANODE CAP ASSY, TCC5609AT
⚠ T801	23211763	COIL, LINE FILTER 35X32H, TRF3241AQ
⚠ T802	23211765	COIL, LF LH35V, TRF3239AH
⚠ T840	23217431	TRANSFORMER, CONVERTER, TPW3425AH
⚠ T862	23217612	TRANSFORMER, CONVERTER, TPW3516AF
SEMICONDUCTORS		
Q151	23314994	TRANSISTOR, 2SA1576A106
Q152	23314993	TRANSISTOR, 2SC4081 Q
Q172	23314993	TRANSISTOR, 2SC4081 Q
Q201	23314993	TRANSISTOR, 2SC4081 Q
Q241	23114756	TRANSISTOR, 2SC2482
Q301	23319787	IC, LA7833S
Q301B	70391356	SCREW, BITTB3X10 SZN
Q302	23000711	IC, TA1317AN
Q305	23314994	TRANSISTOR, 2SA1576A106
Q306	70119059	IC, OP AMP, TA75902P(J)
Q370	23314993	TRANSISTOR, 2SC4081 Q
Q371	23314994	TRANSISTOR, 2SA1576A106
Q372	23314993	TRANSISTOR, 2SC4081 Q
Q400	23205079	TRANSISTOR, 2SC4686A
Q402	23205166	TRANSISTOR, FET, 2SK2962
Q404	23205149	TRANSISTOR, 2SC5859(FA)
Q404B	72471082	SCREW, 3X10MM
Q405	23314962	TRANSISTOR, KTA1266 Y
Q406	23314965	TRANSISTOR, KTC3198 Y
⚠ Q408	23314962	TRANSISTOR, KTA1266 Y
Q409	23314965	TRANSISTOR, KTC3198 Y
Q410	23314993	TRANSISTOR, 2SC4081 Q
Q411	23314993	TRANSISTOR, 2SC4081 Q
Q420	23114756	TRANSISTOR, 2SC2482
Q425	23205031	TRANSISTOR, FET, 2SK2920
Q428	23314965	TRANSISTOR, KTC3198 Y
Q470	23314359	TRANSISTOR, 2SA1321(FA, C)
Q471	23314965	TRANSISTOR, KTC3198 Y
Q472	23314965	TRANSISTOR, KTC3198 Y
Q473	23314962	TRANSISTOR, KTA1266 Y
Q510	23009369	IC, TA1360AFG
Q520	23205054	TRANSISTOR, KTA1504Y
Q521	23205054	TRANSISTOR, KTA1504Y
Q522	23205054	TRANSISTOR, KTA1504Y
Q523	23314993	TRANSISTOR, 2SC4081 Q
Q524	23114497	TRANSISTOR, RN1406
Q525	23114497	TRANSISTOR, RN1406
Q526	23114497	TRANSISTOR, RN1406
Q530	23314994	TRANSISTOR, 2SA1576A106
Q531	23314993	TRANSISTOR, 2SC4081 Q
Q532	23904123	IC, TC4W53F
Q601	23009485	IC, TA8258H(GR)
Q601B	70391356	SCREW, BITTB3X10 SZN

Location No.	Parts No.	Description
Q612	23314994	TRANSISTOR, 2SA1576A106
Q661	70114396	TRANSISTOR, 2SC3326B
Q662	70114396	TRANSISTOR, 2SC3326B
Q663	23906596	IC, BA4558
Q664	23114493	TRANSISTOR, RN2404
Q681	70114396	TRANSISTOR, 2SC3326B
Q682	70114396	TRANSISTOR, 2SC3326B
Q683	23314993	TRANSISTOR, 2SC4081 Q
Q706	23114528	TRANSISTOR, 2SC1740S
Q707	23114437	TRANSISTOR, 2SC752GTM-Y
Q709	23114528	TRANSISTOR, 2SC1740S
Q710	23205123	TRANSISTOR, 2SA933ASQ
Q711	23314909	TRANSISTOR, 2SA1837
Q711B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q712	23314912	TRANSISTOR, 2SC4793
Q712B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q719	23114528	TRANSISTOR, 2SC1740S
Q720	23114528	TRANSISTOR, 2SC1740S
Q721	23114735	TRANSISTOR, 2SA102-Y(C)
Q722	23114733	TRANSISTOR, 2SC2655-Y
Q751	23135040	IC, CONVERGENCE OUT, STK394-250
Q752	23135040	IC, CONVERGENCE OUT, STK394-250
Q760	23205123	TRANSISTOR, 2SA933ASQ
Q761	23314909	TRANSISTOR, 2SA1837
Q761B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q769	23114528	TRANSISTOR, 2SC1740S
Q771	24000445	CHIP JUMPER, 1608TYPE
Q772	23114433	TRANSISTOR, 2SC1815-Y
Q776	23314965	TRANSISTOR, KTC3198 Y
Q777	23314962	TRANSISTOR, KTA1266 Y
Q778	23314965	TRANSISTOR, KTC3198 Y
Q779	23114528	TRANSISTOR, 2SC1740S
Q779	23314965	TRANSISTOR, KTC3198 Y
Q780	23314962	TRANSISTOR, KTA1266 Y
Q781	23114528	TRANSISTOR, 2SC1740S
Q781	23314965	TRANSISTOR, KTC3198 Y
Q782	23319894	IC, NJM79M05FA
Q782	23205123	TRANSISTOR, 2SA933ASQ
Q783	23114528	TRANSISTOR, 2SC1740S
Q783	23205037	TRANSISTOR, 2SJ512
Q783B	70391356	SCREW, BITTB3X10 SZN
Q784	23904268	IC, PQ05RR1
Q784	23314909	TRANSISTOR, 2SA1837
Q784B	70391356	SCREW, BITTB3X10 SZN
Q784B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q785	23314912	TRANSISTOR, 2SC4793
Q785B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q788	23314993	TRANSISTOR, 2SC4081 Q
Q792	23319666	IC, TC74HC123AP(NEW)
Q793	23205031	TRANSISTOR, FET, 2SK2920
Q796	23314993	TRANSISTOR, 2SC4081 Q
Q797	KETSU	
Q798	23314993	TRANSISTOR, 2SC4081 Q
Q801	23135028	IC, STR-Z4479
Q830	23000804	IC, SI-3090J(LF1101)
Q830B	70391356	SCREW, BITTB3X10 SZN
Q831	23319941	IC, SI-3050C
Q831B	70391356	SCREW, BITTB3X10 SZN
Q832	23000806	IC, SI-8033SS

Location No.	Parts No.	Description
Q832B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q833	23905976	IC, PQ05RD11
Q833B	70391356	SCREW, BITTB3X10 SZN
Q840	23906133	IC, MIP280
⚠ Q841	23009270	IC, PHOTO COUPLER, PS2581L1(D)
⚠ Q842	23009270	IC, PHOTO COUPLER, PS2581L1(D)
Q843	23314965	TRANSISTOR, KTC3198 Y
Q844	23314965	TRANSISTOR, KTC3198 Y
⚠ Q862	23009270	IC, PHOTO COUPLER, PS2581L1(D)
⚠ Q881	23319693	IC, SE116N, LF4
Q894	23314965	TRANSISTOR, KTC3198 Y
Q901	23314971	TRANSISTOR, 2SC5360(FA) (51H83)
Q901	23205159	TRANSISTOR, 2SC3942 (57H83/65H83)
Q901B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q902	23114433	TRANSISTOR, 2SC1815-Y (51H83)
Q902	23205165	TRANSISTOR, 2SC3950E (57H83/65H83)
Q911	23314971	TRANSISTOR, 2SC5360(FA) (51H83)
Q911	23205159	TRANSISTOR, 2SC3942 (57H83/65H83)
Q911B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q912	23114433	TRANSISTOR, 2SC1815-Y (51H83)
Q912	23205165	TRANSISTOR, 2SC3950E (57H83/65H83)
Q913	23114735	TRANSISTOR, 2SA102-Y(C) (51H83)
Q913	23314962	TRANSISTOR, KTA1266 Y (57H83/65H83)
Q921	23314971	TRANSISTOR, 2SC5360(FA) (51H83)
Q921	23205159	TRANSISTOR, 2SC3942 (57H83/65H83)
Q921B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q922	23114433	TRANSISTOR, 2SC1815-Y (51H83)
Q922	23205165	TRANSISTOR, 2SC3950E (57H83/65H83)
Q961	23114433	TRANSISTOR, 2SC1815-Y
Q962	23114735	TRANSISTOR, 2SA102-Y(C) (51H83)
Q962	23314962	TRANSISTOR, KTA1266 Y (57H83/65H83)
Q973	23114735	TRANSISTOR, 2SA102-Y(C) (51H83)
Q973	23314962	TRANSISTOR, KTA1266 Y (57H83/65H83)
Q2104	23205123	TRANSISTOR, 2SA933ASQ
Q2105	23205123	TRANSISTOR, 2SA933ASQ
Q2106	23205123	TRANSISTOR, 2SA933ASQ
Q2107	23205123	TRANSISTOR, 2SA933ASQ
Q2108	23205123	TRANSISTOR, 2SA933ASQ
Q2109	23205123	TRANSISTOR, 2SA933ASQ
Q4430	23314164	TRANSISTOR, 2SC2236-Y(C))
QA01	23009505	IC, MCU 1CHIP 16BIT 4M 64P, MN102H85KFJ
QA02	23009330	IC, AT24C64-10PI-2.7
QA70	23319935	IC, MM1096BS
QA71	23314993	TRANSISTOR, 2SC4081 Q
QA72	23314993	TRANSISTOR, 2SC4081 Q
QA80	23906295	IC, UPC29M33HB
QA81	70200563	IC, RESET VS=2.9V, PST9129
QB01	23114528	TRANSISTOR, 2SC1740S
QB03	23114498	TRANSISTOR, RN1405
QB05	23314993	TRANSISTOR, 2SC4081 Q
QB14	23314993	TRANSISTOR, 2SC4081 Q
QB15	23314993	TRANSISTOR, 2SC4081 Q
QB44	23205112	TRANSISTOR, 2SA1980UF-Y(
QB45	23205116	TRANSISTOR, 2SC5343UF-Y(B
QB46	23205112	TRANSISTOR, 2SA1980UF-Y(
QB47	23205116	TRANSISTOR, 2SC5343UF-Y(B
QB55	23314993	TRANSISTOR, 2SC4081 Q
QB61	70114402	TRANSISTOR, 2SC3437-Y
QB81	70114396	TRANSISTOR, 2SC3326B
QB82	70114396	TRANSISTOR, 2SC3326B
QB83	23314994	TRANSISTOR, 2SA1576A106

Location No.	Parts No.	Description
QB84	23314993	TRANSISTOR, 2SC4081 Q
QB85	23314994	TRANSISTOR, 2SA1576A106
QB86	23314994	TRANSISTOR, 2SA1576A106
QB87	23314994	TRANSISTOR, 2SA1576A106
QB88	23314994	TRANSISTOR, 2SA1576A106
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR, AM-30-24CA
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR, AM-30-24CA
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR, AM-30-24CA
QH301	23358557	OPT DEVICE, AM. PHOTOSENSOR, AM-30-24CA
QI01	23114611	TRANSISTOR, 2SC3357
QI02	23314994	TRANSISTOR, 2SA1576A106
QI03	23314993	TRANSISTOR, 2SC4081 Q
QI05	23009240	IC, VIF/SIF SSOP24PIN, TA1274F(FA03A5,EL)
QR14	23314994	TRANSISTOR, 2SA1576A106
QR15	23314994	TRANSISTOR, 2SA1576A106
QR16	23314994	TRANSISTOR, 2SA1576A106
QS03	23314993	TRANSISTOR, 2SC4081 Q
QS04	23314993	TRANSISTOR, 2SC4081 Q
QS05	23318977	IC, MC14052BF
QS06	23318977	IC, MC14052BF
QS07	70114396	TRANSISTOR, 2SC3326B
QS08	70114396	TRANSISTOR, 2SC3326B
QS09	23114493	TRANSISTOR, RN2404
QS10	23904896	IC, JLC1562BF
QS11	23114499	TRANSISTOR, RN1404
QS12	23114499	TRANSISTOR, RN1404
QS13	23114499	TRANSISTOR, RN1404
QS14	23114499	TRANSISTOR, RN1404
QS120	23906596	IC, BA4558
QV01	23906887	IC, CXA2069Q
QV04	23314993	TRANSISTOR, 2SC4081 Q
QV06	23314994	TRANSISTOR, 2SA1576A106
QV09	23314994	TRANSISTOR, 2SA1576A106
QV12	23009418	IC, 2IN-1OUTSW DRIVER, MM1505XNRE
QV70	23314993	TRANSISTOR, 2SC4081 Q
QV71	23314993	TRANSISTOR, 2SC4081 Q
QV72	23314994	TRANSISTOR, 2SA1576A106
QV73	23314994	TRANSISTOR, 2SA1576A106
QV254	23000360	IC, MM1519XQ
QY100	23906515	IC, TC90A45F
QY101	23314993	TRANSISTOR, 2SC4081 Q
QY102	23314993	TRANSISTOR, 2SC4081 Q
QY103	23314994	TRANSISTOR, 2SA1576A106
QY501	23000812	IC, TA1340F
QY502	23205014	TRANSISTOR, 2SC4667-O
QY503	23314994	TRANSISTOR, 2SA1576A106
QY504	23314994	TRANSISTOR, 2SA1576A106
QY507	23314993	TRANSISTOR, 2SC4081 Q
QY511	23314994	TRANSISTOR, 2SA1576A106
QY512	23314994	TRANSISTOR, 2SA1576A106
QY513	23314994	TRANSISTOR, 2SA1576A106
QY514	23314994	TRANSISTOR, 2SA1576A106
QY515	23314994	TRANSISTOR, 2SA1576A106
QY516	23314994	TRANSISTOR, 2SA1576A106
QY518	23314993	TRANSISTOR, 2SC4081 Q
QY520	23314993	TRANSISTOR, 2SC4081 Q
D101	23316755	DIODE, ZENER, MTZJ33C
D230	23118041	DIODE, MA111
D301	23316682	DIODE, ZENER, MTZJ7.5C
D302	23357366	DIODE, FR105-B5
D304	23316794	DIODE, SC570A

Location No.	Parts No.	Description
D305	23118822	DIODE, ERB12-02
D306	23118822	DIODE, ERB12-02
D327	23316715	DIODE, ZENER, MTZJ11A
D336	23316672	DIODE, ZENER, MTZJ5.6B
D337	23316672	DIODE, ZENER, MTZJ5.6B
D365	23316682	DIODE, ZENER, MTZJ7.5C
D370	23118859	DIODE, 1SS133
D401	23118056	DIODE, AG01
D402	23357366	DIODE, FR105-B5
D404	23316254	DIODE, ERC06-15
D406	23115910	DIODE, S5295G
D411	23316731	DIODE, ZENER, MTZJ18B
D412	23118707	DIODE, RP-1H
D413	23118707	DIODE, RP-1H
D414	23357366	DIODE, FR105-B5
D415	23357366	DIODE, FR105-B5
D418	23316755	DIODE, ZENER, MTZJ33C
D419	23316231	DIODE, 1SS355-TE17
D420	23118859	DIODE, 1SS133
D421	23357366	DIODE, FR105-B5
D425	23357366	DIODE, FR105-B5
D426	23316731	DIODE, ZENER, MTZJ18B
D450	23357366	DIODE, FR105-B5
D461	23224366	DIODE, FMQ-3GU
D461B	70391356	SCREW
D470	23316719	DIODE, ZENER, MTZJ12B
⚠ D490	23316675	DIODE, ZENER, MTZJ6.2B
D491	23118859	DIODE, 1SS133
D492	23316690	DIODE, ZENER, MTZJ10B
D502	23118041	DIODE, MA111
D505	23118094	DIODE, EU2A
D520	23118641	DIODE, ZENER, RD2.0ESA B2
D522	23118041	DIODE, MA111
D523	23118041	DIODE, MA111
D531	23316584	DIODE, ZENER CHIP VZ7.77-8.17V MA8082-L
D532	23357365	DIODE, 1N4004A-B5
D533	23316591	DIODE, ZENER, MA8100-M
D534	23316792	DIODE, SC215
D535	23316591	DIODE, ZENER, MA8100-M
D536	23316231	DIODE, 1SS355
D601	23118041	DIODE, MA111
D602	23118041	DIODE, MA111
D603	23118041	DIODE, MA111
D604	23118041	DIODE, MA111
D607	23316622	DIODE, ZENER, MA8270-M
D608	23316622	DIODE, ZENER, MA8270-M
D611	23118041	DIODE, MA111
D612	23118041	DIODE, MA111
D613	23118041	DIODE, MA111
D614	23118041	DIODE, MA111
D615	23118041	DIODE, MA111
D616	23118041	DIODE, MA111
D617	23118041	DIODE, MA111
D704	23118859	DIODE, 1SS133
D705	23118859	DIODE, 1SS133
D715	23118859	DIODE, 1SS133
D721	23316722	DIODE, ZENER, MTZJ13B
D721	23118859	DIODE, 1SS133
D722	23316722	DIODE, ZENER, MTZJ13B
D761	23118859	DIODE, 1SS133
D762	23118859	DIODE, 1SS133
D763	23118859	DIODE, 1SS133
D764	23118859	DIODE, 1SS133
D776	23118859	DIODE, 1SS133
D781	23118859	DIODE, 1SS133

Location No.	Parts No.	Description
D782	23118859	DIODE, 1SS133
D783	23118859	DIODE, 1SS133
D784	23118859	DIODE, 1SS133
D801	23316784	DIODE, RBV1506, LF-A
D830	23118213	DIODE, RK44,
D831	23316663	DIODE, ZENER, MTZJ4.3B
D832	23118859	DIODE, 1SS133
D840	23357207	DIODE, LN1WBA60
D841	23316673	DIODE, ZENER, MTZJ5.6C
D842	23316665	DIODE, ZENER, MTZJ4.7A
D843	23357366	DIODE, FR105-B5
D844	23316672	DIODE, ZENER, MTZJ5.6B
D845	23118859	DIODE, 1SS133
D846	23118633	DIODE, ZENER, RD3.0ES B2
D847	23118633	DIODE, ZENER, RD3.0ES B2
D848	23118859	DIODE, 1SS133
D851	23357216	DIODE, D4SBL20U
D852	23316714	DIODE, RL2Z
D853	23316714	DIODE, RL2Z
D862	23357366	DIODE, FR105-B5
D864	23357366	DIODE, FR105-B5
D873	23316747	DIODE, ZENER, MTZJ27C
D875	23316688	DIODE, ZENER, MTZJ9.1C
D876	23316759	DIODE, ZENER, MTZJ36C
D878	23316686	DIODE, ZENER, MTZJ9.1A
D879	23316747	DIODE, ZENER, MTZJ27C
⚠ D880	23316661	DIODE, ZENER, MTZJ3.9B
D881	23118859	DIODE, 1SS133
D882	23357012	DIODE, 1SS244
D883	23118859	DIODE, 1SS133
D884	23357217	DIODE, D4SBL40
D884B	70391334	SCREW
D885	23357216	DIODE, D4SBL20U
D891	23316184	DIODE, FML-G12S
D891B	70391334	SCREW
D892	23316184	DIODE, FML-G12S
D892B	70391334	SCREW
D893	23316782	DIODE, ZENER, MTZJ6.2C
D894	23118859	DIODE, 1SS133
⚠ D899	24019485	VARISTOR, TNR10V431K
D901	23118859	DIODE, 1SS133
D902	23118859	DIODE, 1SS133 (51H83)
D906	23357012	DIODE, 1SS244 (57H83/65H83)
D907	23357012	DIODE, 1SS244 (57H83/65H83)
D908	23357012	DIODE, 1SS244 (57H83/65H83)
D909	23357012	DIODE, 1SS244 (57H83/65H83)
D911	23118859	DIODE, 1SS133 (51H83)
D912	23118859	DIODE, 1SS133
D913	23115337	DIODE, 1S1834 (57H83/65H83)
D916	23115337	DIODE, 1S1834 (51H83)
D916	23357012	DIODE, 1SS244 (57H83/65H83)
D917	23357012	DIODE, 1SS244 (57H83/65H83)
D918	23357012	DIODE, 1SS244 (57H83/65H83)
D919	23357012	DIODE, 1SS244 (57H83/65H83)
D921	23118859	DIODE, 1SS133
D922	23118859	DIODE, 1SS133 (51H83)
D924	23118859	DIODE, 1SS133 (51H83)
D925	23118859	DIODE, 1SS133 (51H83)
D926	23357012	DIODE, 1SS244 (57H83/65H83)
D927	23357012	DIODE, 1SS244 (57H83/65H83)
D928	23357012	DIODE, 1SS244 (57H83/65H83)
D929	23357012	DIODE, 1SS244 (57H83/65H83)
D931	23118859	DIODE, 1SS133 (51H83)
D932	23118859	DIODE, 1SS133 (51H83)
D933	23118859	DIODE, 1SS133 (51H83)

Location No.	Parts No.	Description
D934	23118859	DIODE, 1SS133 (51H83)
D936	23115337	DIODE, 1S1834
D941	23118859	DIODE, 1SS133
D942	23118859	DIODE, 1SS133
D943	23118859	DIODE, 1SS133
D946	23118859	DIODE, 1SS133 (51H83)
D961	23118859	DIODE, 1SS133 (51H83)
D962	23118859	DIODE, 1SS133 (51H83)
D963	23118859	DIODE, 1SS133 (51H83)
D964	23118859	DIODE, 1SS133 (51H83)
D965	23118859	DIODE, 1SS133 (51H83)
D966	23118859	DIODE, 1SS133 (51H83)
D967	23115337	DIODE, 1S1834
D4401	23316591	DIODE, ZENER, MA8100-M
D4430	23357365	DIODE, 1N4004A-B5
D4431	23316715	DIODE, ZENER, MTZJ11A
D4604	23316231	DIODE, 1SS355
D4605	23316591	DIODE, ZENER, MA8100-M
D4606	23316231	DIODE, 1SS355
D7703	23357365	DIODE, 1N4004A-FL
D7705	23316231	DIODE, 1SS355-TE17
D7706	23316231	DIODE, 1SS355-TE17
D7707	23316231	DIODE, 1SS355-TE17
D7708	23316231	DIODE, 1SS355-TE17
D7717	23118538	DIODE, ZENER, RD6.2ESA B2
D7718	23118538	DIODE, ZENER, RD6.2ESA B2
D7729	23316738	DIODE, ZENER, MTZJ22B
D7730	23118538	DIODE, ZENER, RD6.2ESA B2
D7731	23118538	DIODE, ZENER, RD6.2ESA B2
D7732	23357365	DIODE, 1N4004A-FL
D7733	23118499	DIODE, ZENER, RD18ESA B2
D7734	23118499	DIODE, ZENER, RD18ESA B2
D7735	23357365	DIODE, 1N4004A-FL
D7806	23118041	DIODE, MA111
D7808	23118094	DIODE, EU2A
D7809	23316231	DIODE, 1SS355-TE17
D7810	23118052	DIODE, RU4Z LF-L1
D7811	23316231	DIODE, 1SS355-TE17
D7820	KETSU	
DA02	23316574	DIODE, ZENER CHIP VZ6.05-6.36V MA8062-M
DA23	23118041	DIODE, MA111
DA43	23118041	DIODE, MA111
DA44	23118041	DIODE, MA111
DA45	23118041	DIODE, MA111
DA46	23118041	DIODE, MA111
DA70	23118041	DIODE, MA111
DB01	23358564	DIODE, LED, SLR-56VC3FPQ
DB03	23358522	DIODE, LED, SIR-56SB3F
DB30	23118041	DIODE, MA111
DB31	23118041	DIODE, MA111
DB61	23118041	DIODE, MA111
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DH301	23316672	DIODE, ZENER, MTZJ5.6B
DS120	23316740	DIODE, ZENER, MTZ J 22D
DV30	23316792	DIODE, SC215
DV31	23316672	DIODE, ZENER, MTZJ5.6B
DV39	23358543	PHOTO SENSOR, IF=10MA 650NM S7565
DV241	23316587	DIODE, ZENER, MA8091-L
DV242	23316587	DIODE, ZENER, MA8091-L
DV243	23316587	DIODE, ZENER, MA8091-L
DV244	23316587	DIODE, ZENER, MA8091-L
DV249	23316587	DIODE, ZENER, MA8091-L
DV250	23316587	DIODE, ZENER, MA8091-L

Location No.	Parts No.	Description
DV251	23316577	DIODE, ZENER, MA8068-M
DV252	23316577	DIODE, ZENER, MA8068-M
DV256	23316587	DIODE, ZENER, MA8091-L
DV257	23316587	DIODE, ZENER, MA8091-L
DV258	23316587	DIODE, ZENER, MA8091-L
MISCELLANEOUS		
B224	23035412	SCREW, BTB4X12SZN
B231	23037312	SCREW, BTBW3X12SZN
B232	23035310	SCREW, BTB3X10SZN
B233	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
BB10	23713013	CONNECTOR, SOCKET, B-B 16P 1.5
BB20	23713013	CONNECTOR, SOCKET, B-B 16P 1.5
E913	23198540	CRT EARTH ASSY, TP48E60
E929	23969684	TAPE, GLASS-CLOTH, W/ADHESIVE W=90 T=0.18
E943	23198540	CRT EARTH ASSY, TP48E60
E959	23969684	TAPE, GLASS-CLOTH, W/ADHESIVE W=90 T=0.18
E973	23198540	CRT EARTH ASSY, TP48E60
E989	23969684	TAPE, GLASS-CLOTH, W/ADHESIVE W=90 T=0.18
⚠ F470	23144624	FUSE, AXIAL, 125V 2.0A
⚠ F7711	23144509	FUSE, AXIAL, 125V 2.5A
⚠ F7716	23144509	FUSE, AXIAL, 125V 2.5A
⚠ F7721	23144509	FUSE, AXIAL, 125V 2.5A
⚠ F7726	23144509	FUSE, AXIAL, 125V 2.5A
⚠ F7731	23144509	FUSE, AXIAL, 125V 2.5A
⚠ F7736	23144509	FUSE, AXIAL, 125V 2.5A
⚠ F801	23144481	FUSE, 125V 7.0A-T U/C MINI
F801A	23165433	FUSE HOLDER, 5.2 SOC
F801B	23165433	FUSE HOLDER, 5.2 SOC
⚠ F840	23144581	FUSE, AXIAL, 125V 200MA
⚠ F850	23144510	FUSE, AXIAL, 125V 3.5A
⚠ F851	23144456	FUSE, AXIAL, 125V 5.0A
⚠ F852	23144456	FUSE, AXIAL, 125V 5.0A
⚠ F860	23144626	FUSE, AXIAL, 125V 4.0A
⚠ F885	23144511	FUSE, AXIAL, 125V 4.0A
⚠ F891	23144456	FUSE, AXIAL, 125V 5.0A
⚠ F892	23144456	FUSE, AXIAL, 125V 5.0A
G101	24011151	CHIP, METAL FILM, 1/20W 150 OHM J
G102	24011151	CHIP, METAL FILM, 1/20W 150 OHM J
GJ07	24000824	CHIP JUMPER, 2125TYPE
GJ33	24000445	CHIP JUMPER, 1608TYPE
GJ79	24000824	CHIP JUMPER, 2125TYPE
GJ81	24000824	CHIP JUMPER, 2125TYPE
GJ83	24000824	CHIP JUMPER, 2125TYPE
GJ101	24000445	CHIP JUMPER, 1608TYPE
GJ102	24000445	CHIP JUMPER, 1608TYPE
GJ105	24000445	CHIP JUMPER, 1608TYPE
GJ109	24000445	CHIP JUMPER, 1608TYPE
GJ110	24000445	CHIP JUMPER, 1608TYPE
GJ113	24000445	CHIP JUMPER, 1608TYPE
GJ114	24000824	CHIP JUMPER, 2125TYPE
GJ116	24000445	CHIP JUMPER, 1608TYPE
GJ118	24000445	CHIP JUMPER, 1608TYPE
GJ121	24000445	CHIP JUMPER, 1608TYPE
GJ122	24000445	CHIP JUMPER, 1608TYPE
GJ123	24000824	CHIP JUMPER, 2125TYPE
GJ127	24000445	CHIP JUMPER, 1608TYPE
GJ128	24000445	CHIP JUMPER, 1608TYPE
GJ603	24000445	CHIP JUMPER, 1608TYPE
GJ605	24000824	CHIP JUMPER, 2125TYPE
GJ606	24000824	CHIP JUMPER, 2125TYPE

Location No.	Parts No.	Description
GJ710	24000445	CHIP JUMPER, 1608TYPE
GJ711	24000445	CHIP JUMPER, 1608TYPE
GJ771	24000445	CHIP JUMPER, 1608TYPE
GJ772	24000445	CHIP JUMPER, 1608TYPE
GJ773	24000445	CHIP JUMPER, 1608TYPE
GJ774	24000445	CHIP JUMPER, 1608TYPE
GJ775	24000445	CHIP JUMPER, 1608TYPE
GJ776	24000445	CHIP JUMPER, 1608TYPE
GJA33	24000445	CHIP JUMPER, 1608TYPE
GR96	24000445	CHIP JUMPER, 1608TYPE
GR99	24000445	CHIP JUMPER, 1608TYPE
H002	23148042	IF MODULE, US WOW MSP3440G, MVUS51
H003	23124087	ANTENNA SWITCH, 2I3O BUNPAI US, RSU135X1
H003A	23740989	NUT, F-CONNECTOR 2H BS
KB01	23000852	IC, REMOTE PHOTO RECEIVER, PIC-37043TE2
P412	23713014	CONNECTOR, BRIDGE PLUG 16P 1.5
P413	23713014	CONNECTOR, BRIDGE PLUG 16P 1.5
P540	23903176	SOCKET, SOCKET 60P TKD 136901160W4
P708	23902655	CONNECTOR, B-B 15P
P709	23902655	CONNECTOR, B-B 15P
P710	23902655	CONNECTOR, B-B 15P
P711	23367724	CONNECTOR, PLUG B-B 15P
⚠ P800	23368013	CONNECTOR, PLUG, 2P 11.88MM W VT-JST
⚠ P801	23372117	POWER CORD, U/C 125V10A HSV 5, CMC-02P 5
P900	23164563	CONNECTOR, PLUG 3P
P900	23164563	CONNECTOR, PLUG 3P
P900	23164563	CONNECTOR, PLUG 3P
P900	23164563	CONNECTOR, PLUG 3P
PB11	23368587	CONNECTOR, PLUG, 8P 2.5MM W EH-JST, S8B-EH
PB13A	23367677	PLUG, 4P
PV01	23023094	JACK, PIN 1S6P SMK, LAP5120-0205FC
PV02	23023096	JACK, PIN 10P SMK, LAP5120-0401FC
PV02	23365819	JACK, 1S3P
PV05	23023095	JACK, PIN 8P SMK, LAP5120-0411FC
S601	23344456	SWITCH, SLIDE SK22F28G9A MORNI
SA01	23145226	SWITCH, 1C1P, PUSH
SA02	23145226	SWITCH, 1C1P, PUSH
SA03	23145226	SWITCH, 1C1P, PUSH
SA04	23145226	SWITCH, 1C1P, PUSH
SA05	23145226	SWITCH, 1C1P, PUSH
SA06	23145226	SWITCH, 1C1P, PUSH
SA07	23145226	SWITCH, 1C1P, PUSH
SA08	23145226	SWITCH, 1C1P, PUSH
SA09	23145226	SWITCH, 1C1P, PUSH
⚠ SR81	23146574	RELAY, DLS5D1-O(M) 0.15W
⚠ SR82	23146564	RELAY, DC12V, TV5, DG-3
UH01	23148051	MODULE, D-CONVER, MDCU11
UV02	23788762	SCAN CONVERTER MODUL, 03DVI, MHDM01
UZ01	23148052	SCAN CONVERTER MODUL, G.HYPER, MVPU41
⚠ V901A	23903148	SOCKET, ISH-44S-E ICE #5 (51H83)
⚠ V901A	23903168	SOCKET, CVT3277-5104G SMK, CVT3277-5104G (57H83/65H83)
⚠ V902A	23903148	SOCKET, ISH-44S-E ICE #5 (51H83)
⚠ V902A	23903168	SOCKET, CVT3277-5104G SMK, CVT3277-5104G (57H83/65H83)
⚠ V903A	23903148	SOCKET, ISH-44S-E ICE #5 (51H83)
⚠ V903A	23903168	SOCKET, CVT3277-5104G SMK, CVT3277-5104G (57H83/65H83)
W661	23351208	SPEAKER, 160X160 8-OHM 15W, SPK-1235AW
W662	23351208	SPEAKER, 160X160 8-OHM 15W, SPK-1235AW
X4402	23153721	CERAMIC RESONATOR, 503KHZ
XA01	23153533	CERAMIC RESONATOR, CERA RESO, TCR1082AM
XY501	23153961	CRYSTAL, 3.58MHZ
XY502	23153721	CERAMIC RESONATOR, 503KHZ
Z401	23140203	SPARK GAP, 2.0-3.0KV C-010, AG20PC152F-L3N
⚠ Z410	23110841	FOCUS PACK, TPA6030
Z410A	23505177	CABLE, FOCUS
⚠ Z450	24083013	COMPOSITE PARTS, CR-BLOCK, TPA5010AH
Z450A	23501755	ANODE CABLE, 400LD FBT-C
ZH04	23103778	FILTER, FERRITE CORE, TFE1008
ZH05	23103840	FERRITE CORE, TFE1013
ZI51	23303197	PIF SAW FILTER, TSF1248P
ZI52	23303271	FILTER, TRAP 4.5MHZ, TCF1138AM
ZI53	23303289	FILTER, TCF1141AM
ZI55	23303244	FILTER, CERAMIC TRAP, TCF1121AM
ZV60	23103778	FILTER, FERRITE CORE, TFE1008

PC BOARD ASSEMBLIES

✻ E031Z	23788600	CRT-D/R BOARD, PD1200A-1 (51H83)
✻ E031Z	23788523	CRT-D/R BOARD, PD1153A-1 (57H83/65H83)
✻ E032Z	23788601	CRT-D/G BOARD, PD1200A-2 (51H83)
✻ E032Z	23788524	CRT-D/G BOARD, PD1153A-2 (57H83/65H83)
✻ E033Z	23788602	CRT-D/B BOARD, PD1200A-3 (51H83)
✻ E033Z	23788525	CRT-D/B BOARD, PD1153A-3 (57H83/65H83)
✻ E034Z	23788603	SVM/R BOARD, PD1200A-4 (51H83)
✻ E034Z	23788526	SVM/R BOARD, PD1153A-4 (57H83/65H83)
✻ E035Z	23788604	SVM/G BOARD, PD1200A-5 (51H83)
✻ E035Z	23788527	SVM/G BOARD, PD1153A-5 (57H83/65H83)
✻ E036Z	23788605	SVM/B BOARD, PD1200A-6 (51H83)
✻ E036Z	23788528	SVM/B BOARD, PD1153A-6 (57H83/65H83)
✻ E041Z	23788529	FRONT-CON BOARD, PD1154-1
✻ E042Z	23788530	FRONT-IN BOARD, PD1154-2
✻ E043Z	23788531	REM BOARD, PD1154-3
✻ E044Z	23788532	FRONT-SEN BOARD, PD1154-4
✻ E051Z	23786222	CONV-SEN BOARD, PD0079-1
✻ E052Z	23786223	CONV-SEN2 BOARD, PD0079-2
✻ E053Z	23786224	CONV-SEN3 BOARD, PD0079-3
✻ E054Z	23786225	CONV-SEN4 BOARD, PD0079-4
✻ U401	23788519	DEFCONVER BOARD, PD1147A
✻ U701	23788563	CONVER OUT BOARD, PD1163A-2
✻ U801	23788521	POWER BOARD, PD1151A
✻ U901	23788518	SIGNAL BOARD, PD1146A
✻ UD01	23788562	DDCON BOARD, PD1163A-1
✻ UF01	23788269	IF BOARD, PD1022A

PICTURE TUBE

⚠ V901R	23071475	OTHER BLOCK, COUPLING R 51H83 (51H83)
⚠ V901R	23086603	OTHER BLOCK, COUPLING R 57H82 (57H83)
⚠ V901R	23072162	OTHER BLOCK, COUPLING R 65H83 (65H83)
⚠ V902G	23071476	OTHER BLOCK, COUPLING G 51H83 (51H83)
⚠ V902G	23086604	OTHER BLOCK, COUPLING G 57H82 (57H83)
⚠ V902G	23072163	OTHER BLOCK, COUPLING G 65H83 (65H83)
⚠ V903B	23071400	OTHER BLOCK, COUPLING B 51H83 (51H83)
⚠ V903B	23071302	OTHER BLOCK, COUPLING B 57H83 (57H83)
⚠ V903B	23071473	OTHER BLOCK, COUPLING B 65H83 (65H83)

TUNER

⚠ H001	23321460	TUNER, US181CH IIC FONO 5V, ELA52LX2
⚠ HY01	23321460	TUNER, US181CH IIC FONO 5V, ELA52LX2

Location No.	Parts No.	Description
ACCESSORIES		
⚠ K912	23306413	REMOCON HAND UNIT IR, PJTVUSA, CT-90086
⚠ Y101	23565901	OWNER'S MANUAL, ENGLISH/FRENCH, 51H83/57H83/65H83
CABINET PARTS		
⚠ A001	23411859	CABINET, WOOD CABINET SHIP, 51H83 (51H83)
⚠ A001	23411854	CABINET, WOOD CABINET SHIP, 57H83 (57H83)
⚠ A001	23411867	CABINET, WOOD CAB SHIP, 65H83 (65H83)
A102	23527268	GRILLE, SPEAKER GRILLE 51 REG, 51H83 (51H83)
A102	23527269	GRILLE, SPEAKER GRILLE 57 REG, 57H83 (57H83)
A102	23527279	GRILLE, SPK GRILLE ASSY, 65H83 (65H83)
A160	23469228	CASTER, TP50H60
⚠ A201	23530779	COVER, BEZEL, 51H83 (51H83)
⚠ A201	23530782	COVER, BEZEL, 57H83 (57H83)
⚠ A201	23530796	COVER, BEZEL, 65H83 (65H83)
A202	23450650	PANEL, CONTROL ASSY 57H83
A213	23428188	DOOR, 57H83
A215	23929911	PIECE, SNAP-IN GEAR DAMPER, CONNON
A222	23929910	PIECE, FILTER, 57HX83
A223	23445706	BUTTON, POWER BUTTON, 57H83
A268	23530772	COVER, FRONT COVER, 51H83 (51H83)
A268	23530770	COVER, FRONT COVER, 57HX83 (57H83)
A268	23530771	COVER, FRONT COVER, 65H83 (65H83)
A329	23433231	DECORATIVE, PIECE, 51H83 (51H83)
A329	23433230	DECORATIVE, PIECE, 57H83 (57H83)
A331	23929897	PIECE, POLE BOTTOM LEFT, 51H83 (51H83)
A331	23929899	PIECE, POLE BOTTOM LEFT, 57H83 (57H83/65H83)
A332	23929898	PIECE, POLE BOTTOM RIGHT, 51H83 (51H83)
A332	23929900	PIECE, POLE BOTTOM RIGHT, 57H83 (57H83/65H83)
⚠ A401	23530781	COVER, BACK COVER, 51H83 (51H83)
⚠ A401	23530761	BACK COVER ASSY, 57HX83 (57H83)
⚠ A401	23530774	COVER, BACK COVER ASSY, 65H83 (65H83)
⚠ A421	23530812	COVER, REAR BOARD, 57H83
⚠ A424	23530784	COVER, BACKBOARD, 57H83
A510	23030815	SCREW, WOOD, PTD #6 X 3/4
A701	23067099	CARTON, CARTON, 51H83 (51H83)
A701	23067100	CARTON, CARTON, 57H83 (57H83)
A701	23064558	CARTON, CARTON, 65H81 (65H83)
A703	23946479	PACKING, TOP PACKING, 51H83 (51H83)
A703	23946481	PACKING, TOP PACKING, 57H83 (57H83)
A703	23946500	PACKING, TOP, 65H83 (65H83)
A708	23946478	PACKING, BOTTOM PACKING, 51H83 (51H83)
A708	23946480	PACKING, BOTTOM PACKING, 57H83 (57H83)
A708	23946499	PACKING, BOTTOM, 65H83 (65H83)
A709	23946483	PACKING, BOTTOM TRAY, 51H83 (51H83)
A709	23946187	PACKING, BASE TRAY, 57H81 (57H83)
A721	23943628	PLYETHLENE COVERING, 46GM88T
K501	23311015	SCREEN, 51KNH LENTICULAR SHEET, SCREEN51KNHL (51H83)
K501	23311013	SCREEN, 57KNH LENTICULAR SHEET, SCREEN57KNHL (57H83)
K501	23311011	SCREEN, 65KNH LENTICULAR SHEET, SCREEN65KNHL (65H83)
K502	23311016	SCREEN, 51KN FRESNEL SHEET, SCREEN51KN-F (51H83)
K502	23311014	SCREEN, 57KN FRESNEL SHEET, SCREEN57KN-F (57H83)
K502	23311010	SCREEN, 65KN FRESNEL SHEET, SCREEN65KN-F (65H83)
K503	23311019	SCREEN, PROTECTOR 51RN, SCR-PRO51RN (51H83)
K503	23311862	SCREEN, PROTECTOR 57RL, SCR-PRO57RL (57H83)
K503	23311861	SCREEN, PROTECTOR 65RL, SCR-PRO65RL (65H83)
K601	23405249	MIRROR, 51WL, 51H83 (51H83)
K601	23405028	MIRROR, 57WL 1070/770x600x3, 57H81 (57H83)
K601	23405029	MIRROR, 65WL, 65H81 (65H83)

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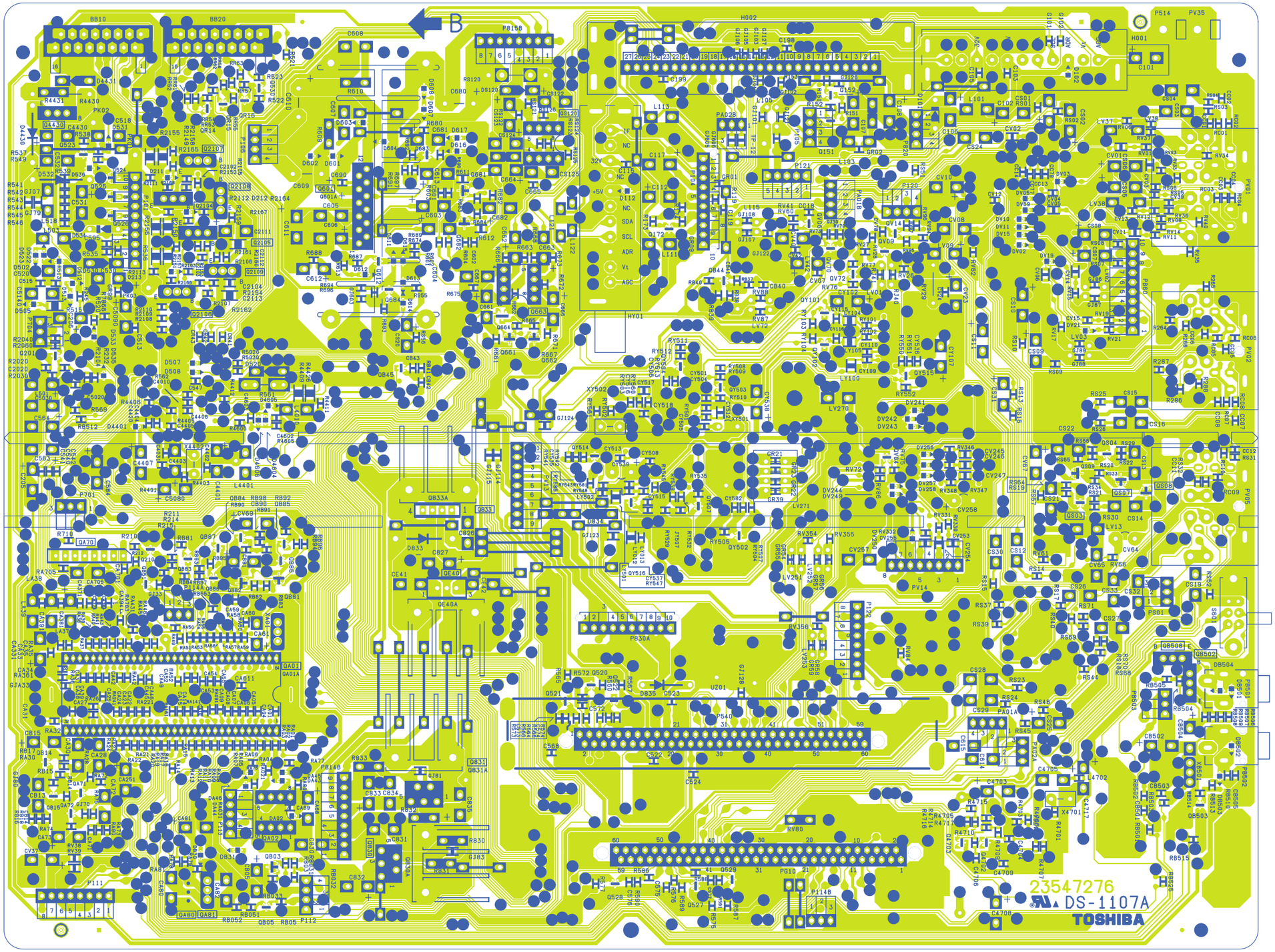
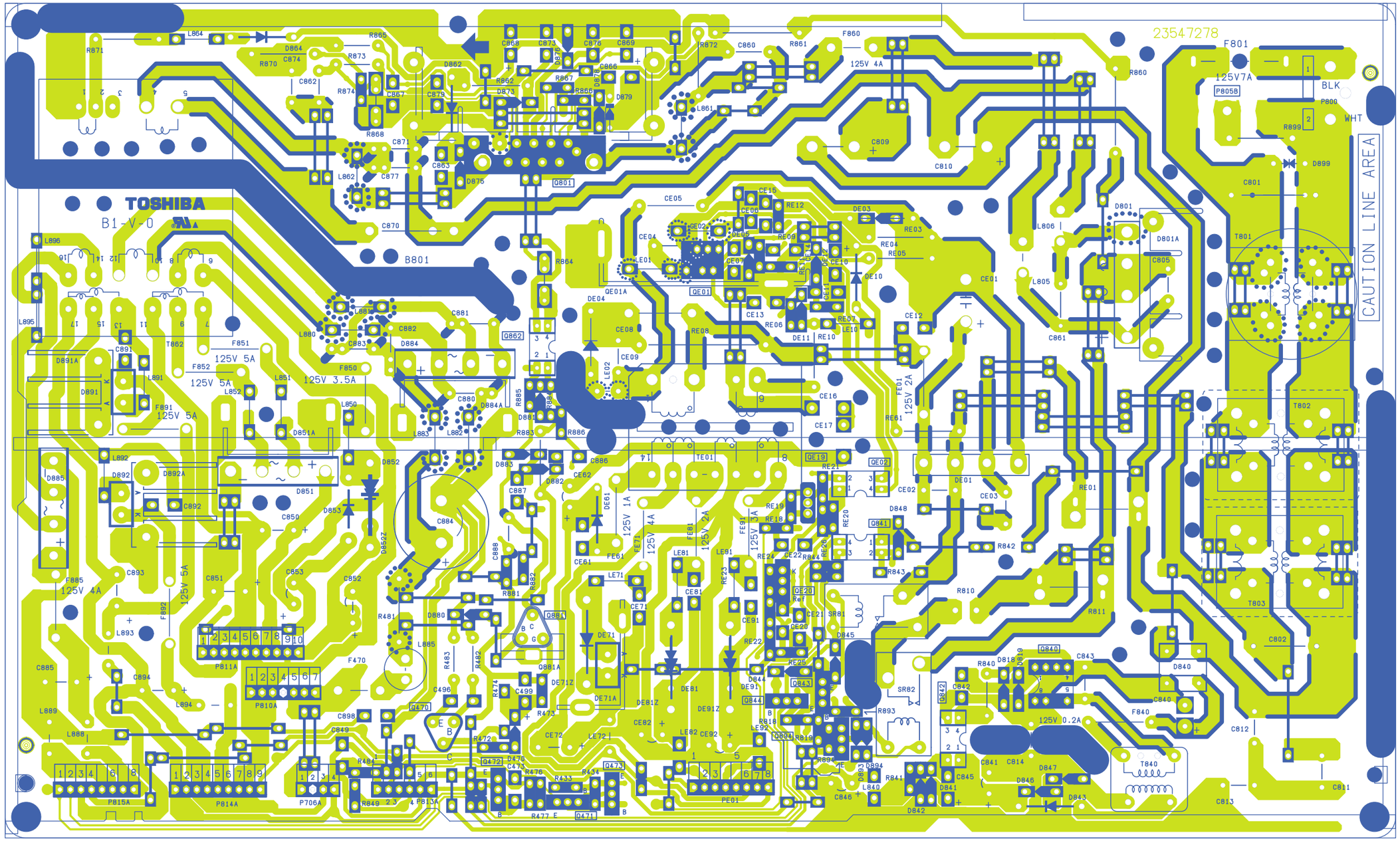
SIGNAL BOARD PD1146A

BOTTOM (FOIL) SIDE



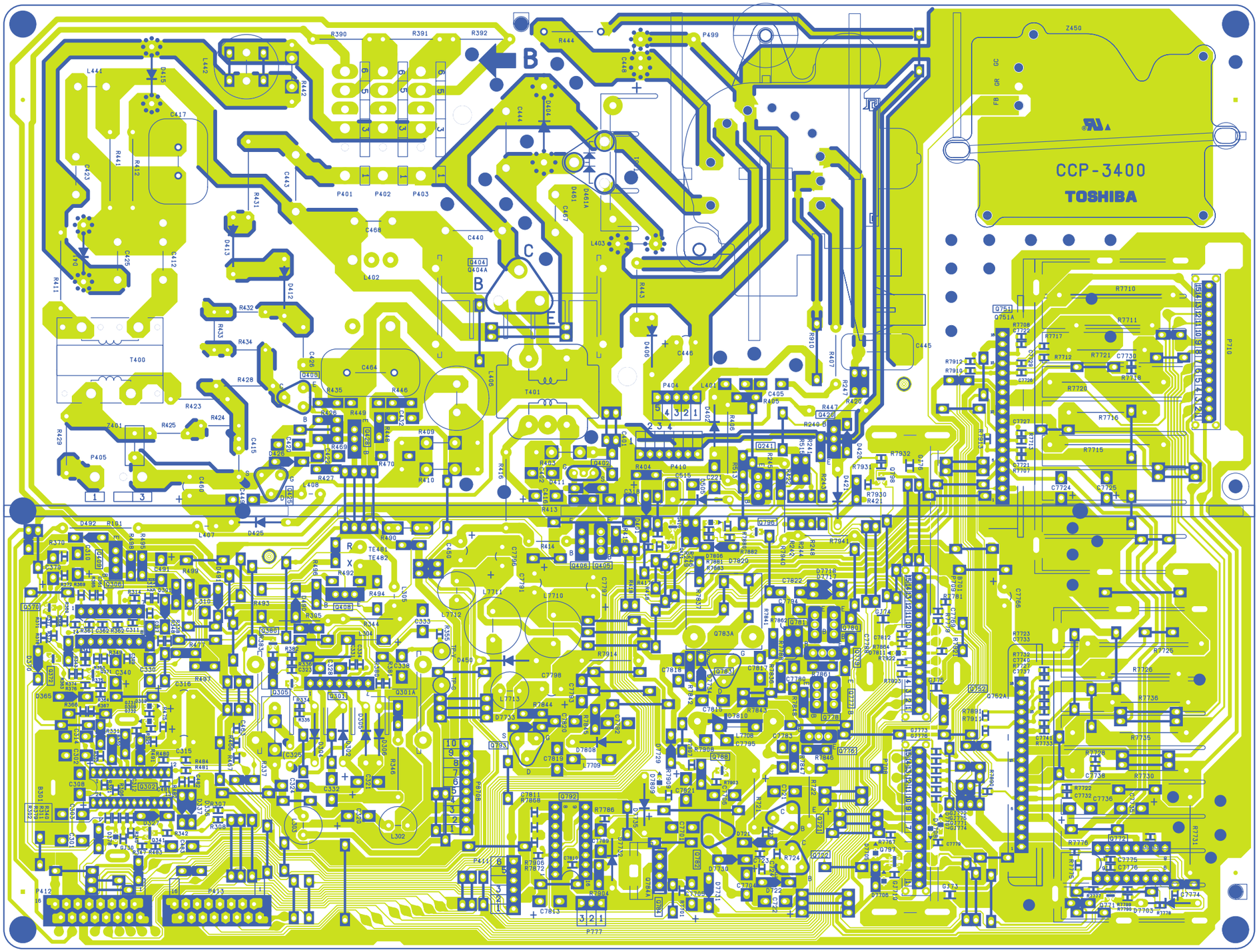
POWER BOARD PD1151A

BOTTOM (FOIL) SIDE



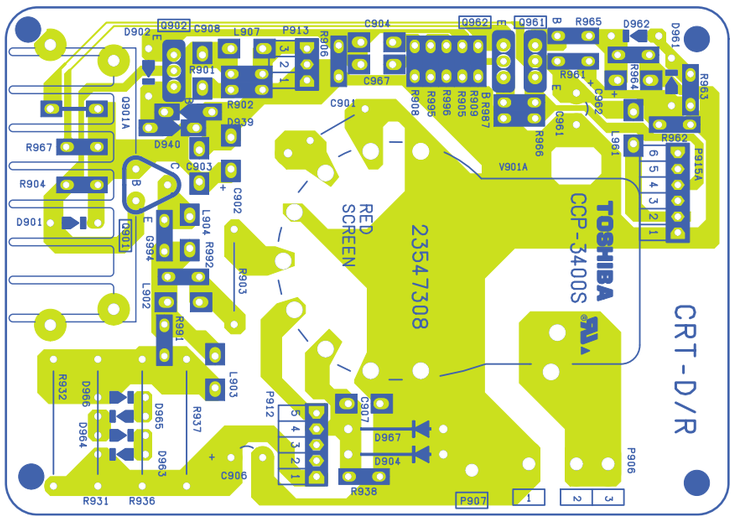
DEF/CONVER BOARD PD1147A

BOTTOM (FOIL) SIDE



CRT-D/R BOARD PD1200A-1 (51H83)

BOTTOM (FOIL) SIDE



CRT-D/G BOARD PD1200A-2 (51H83)

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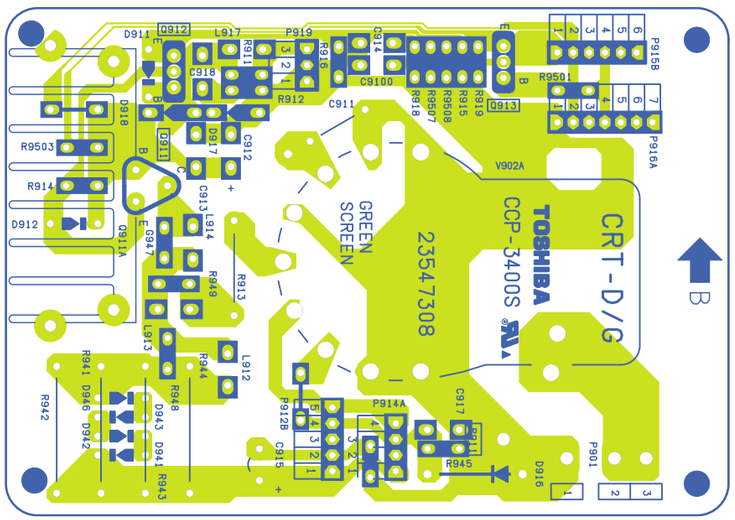

CRT-D/B BOARD PD1200A-3 (51H83)

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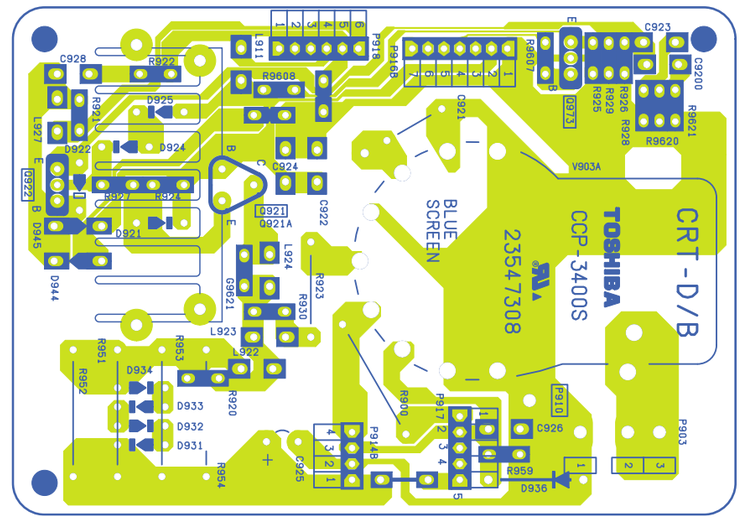

SVM/R BOARD PD1200A-4 (51H83)

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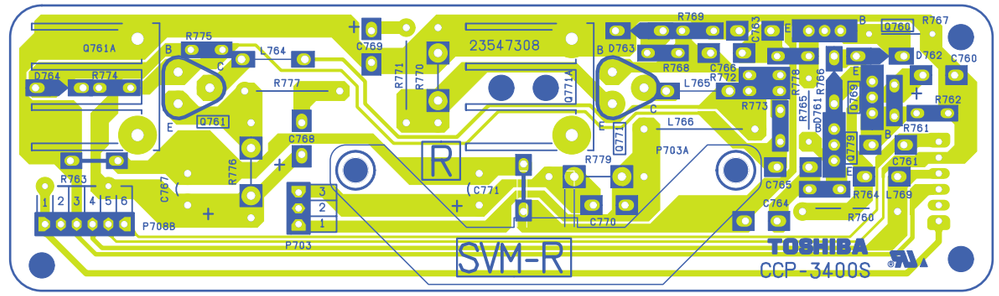
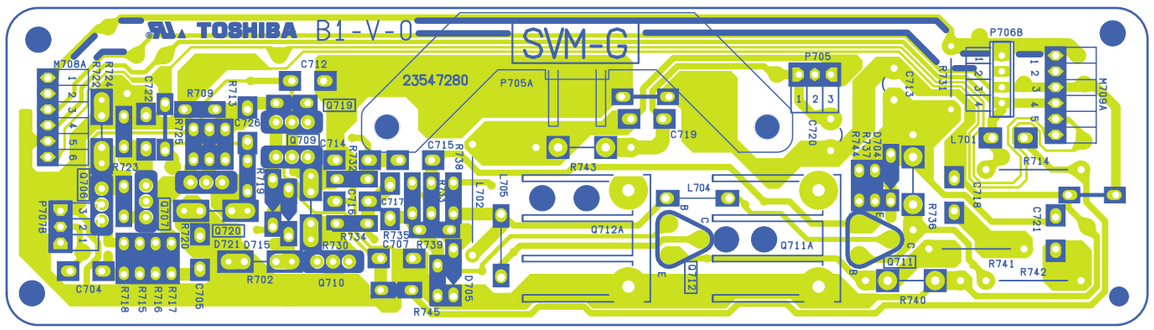


SVM/G BOARD PD1200A-5 (51H83)

BOTTOM (FOIL) SIDE



SVM/B BOARD PD1200A-6 (51H83)

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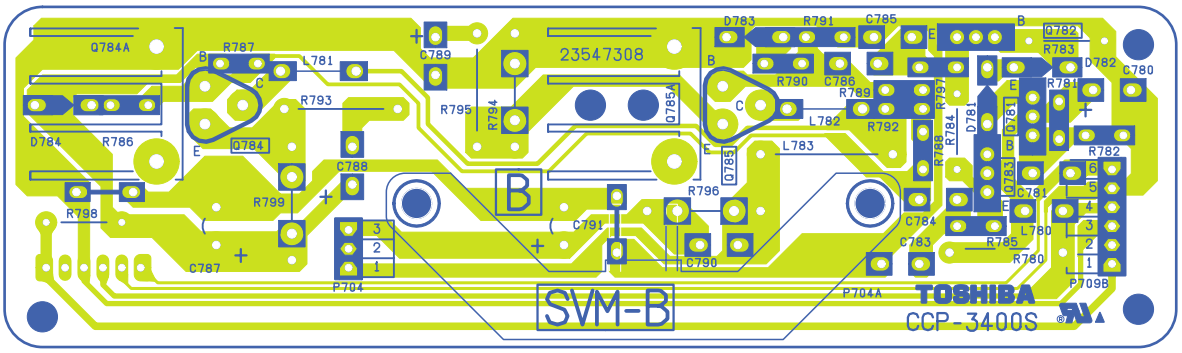

CRT-D/R BOARD PD1153A-1 (57H83/65H83)

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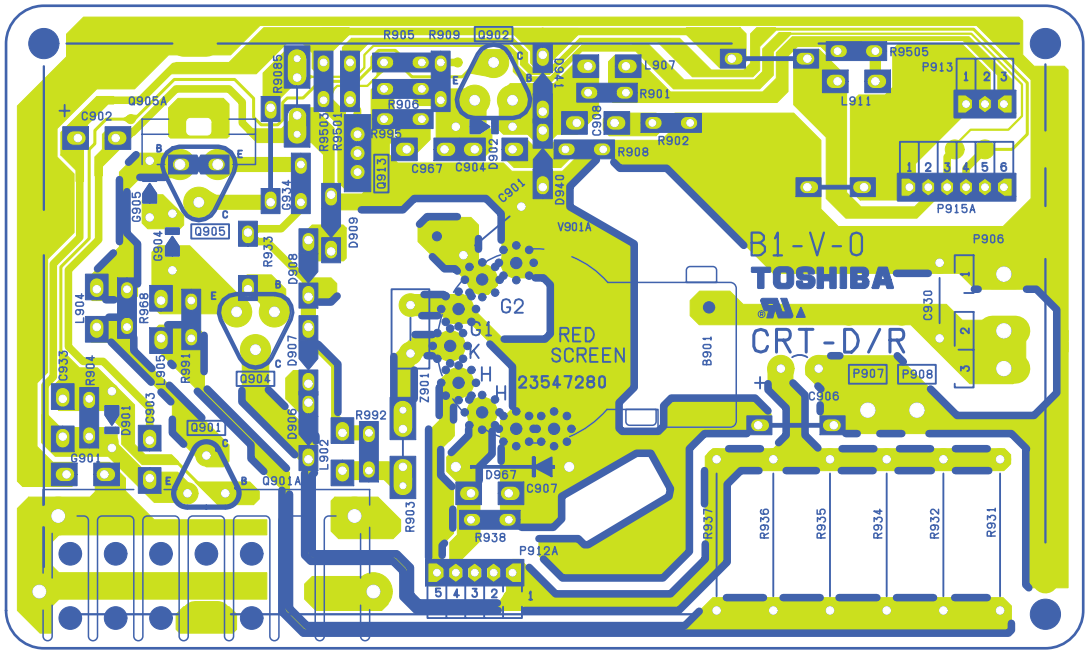

CRT-D/G BOARD PD1153A-2 (57H83/65H83)

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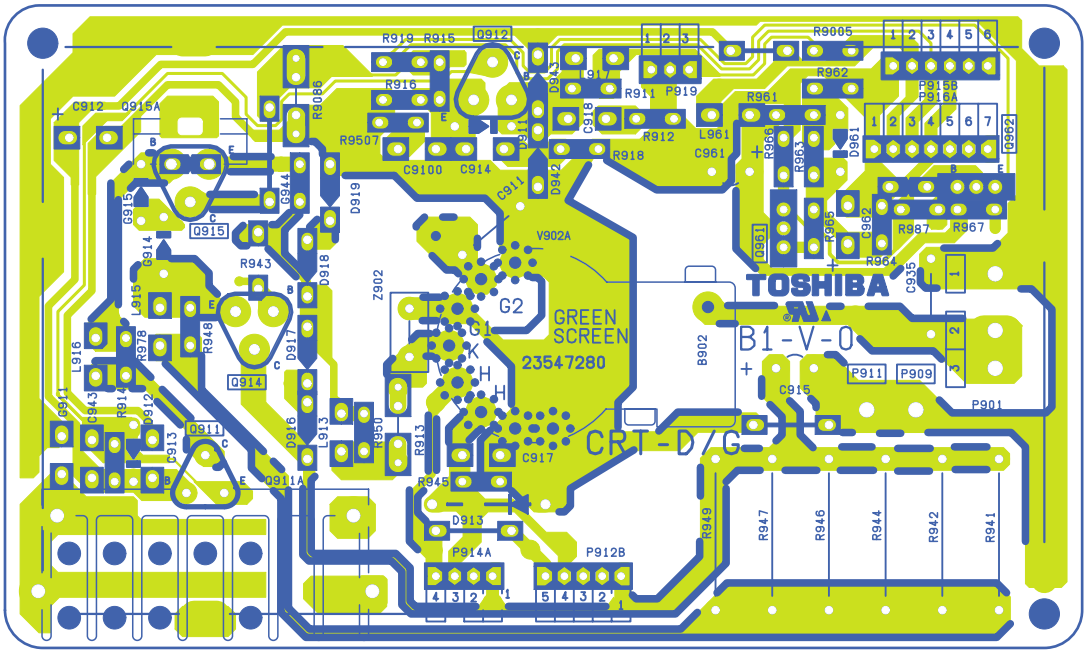
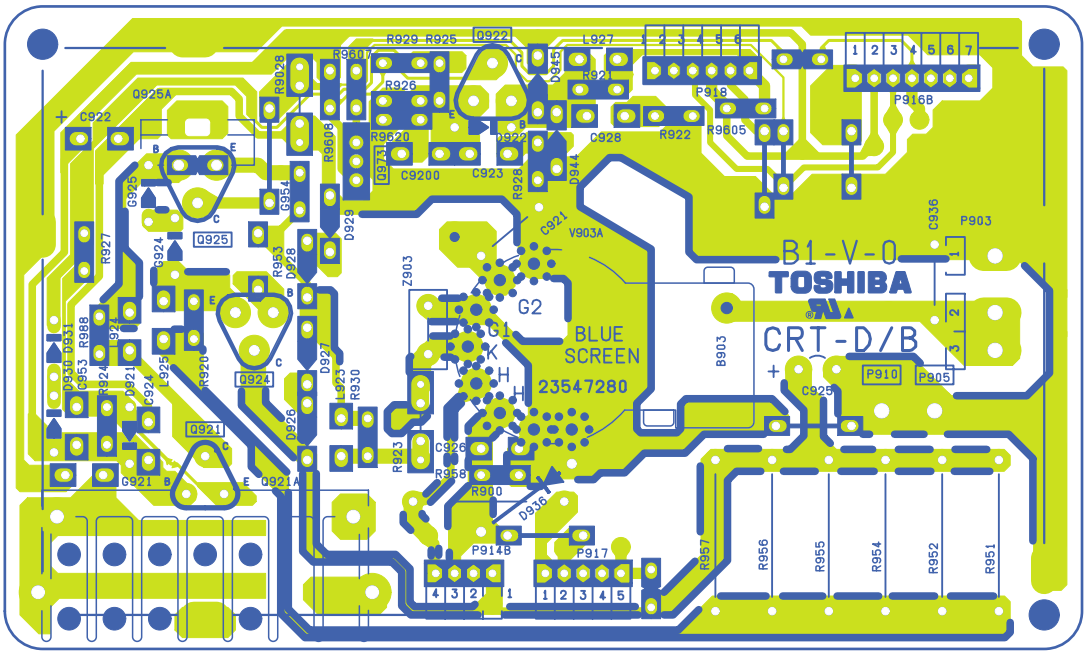


CRT-D/B BOARD PD1153A-3 (57H83/65H83)

BOTTOM (FOIL) SIDE



SVM/R BOARD PD1153A-4 (57H83/65H83)

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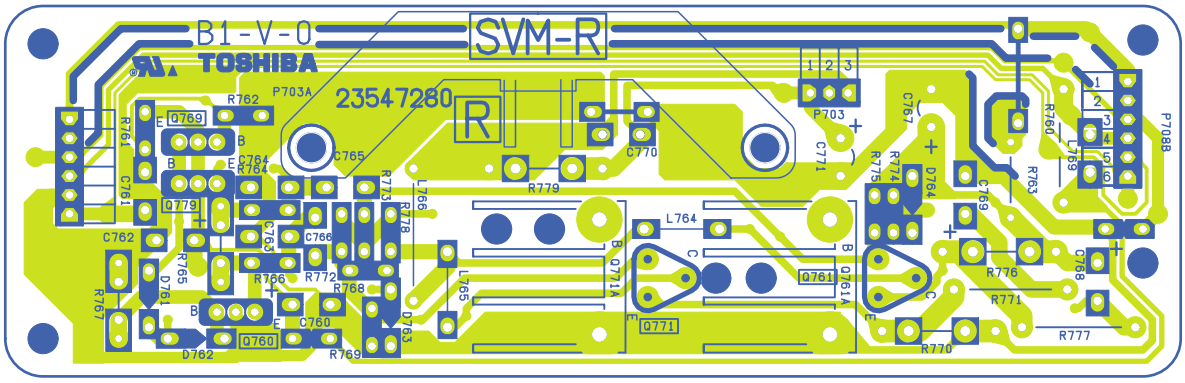
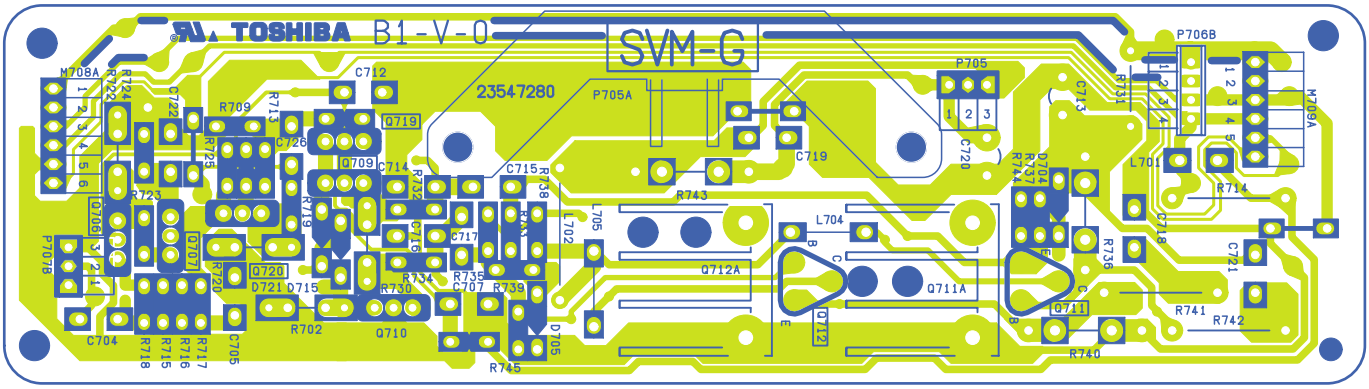


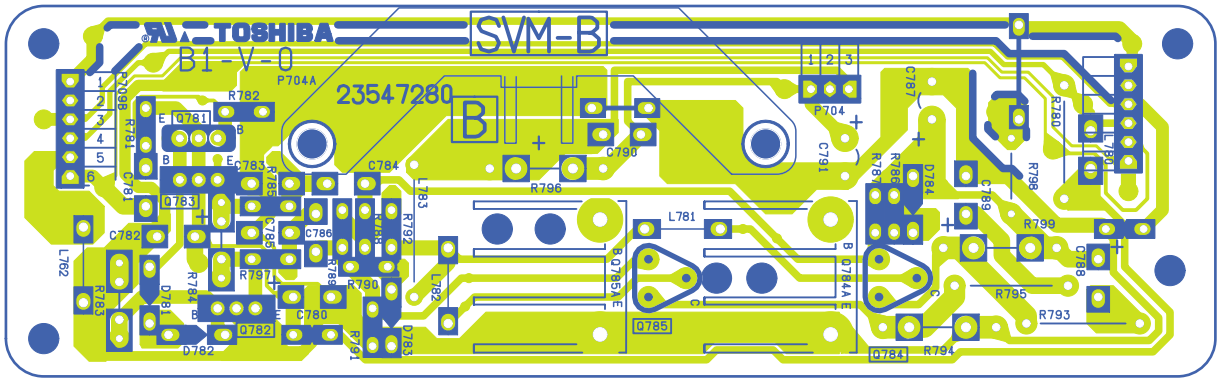
SVM/G BOARD PD1153A-5 (57H83/65H83)

BOTTOM (FOIL) SIDE



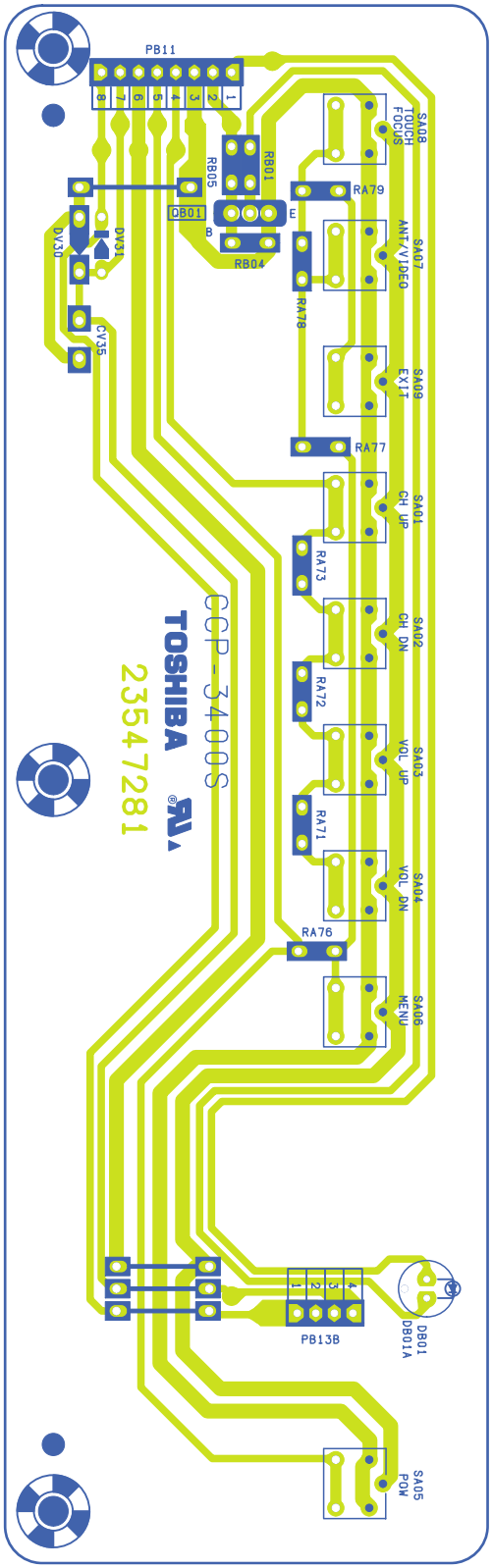
SVM/B BOARD PD1153A-6 (57H83/65H83)

BOTTOM (FOIL) SIDE



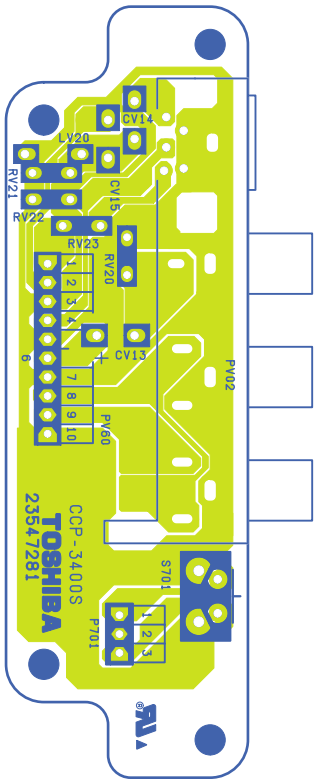
FRONT-CON BOARD PD1154-1

BOTTOM (FOIL) SIDE



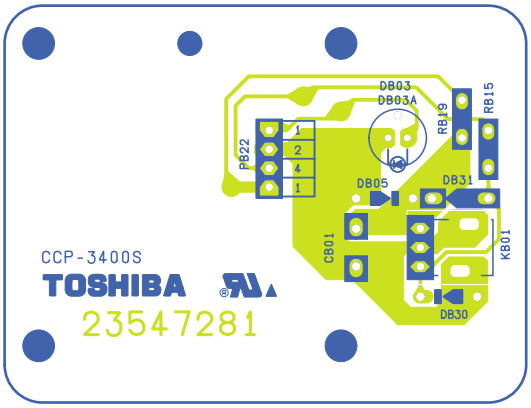
FRONT-IN BOARD PD1154-2

BOTTOM (FOIL) SIDE



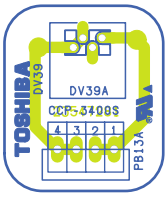
REM BOARD PD1154-3

BOTTOM (FOIL) SIDE



FRONT-SEN BOARD PD1154-4

BOTTOM (FOIL) SIDE

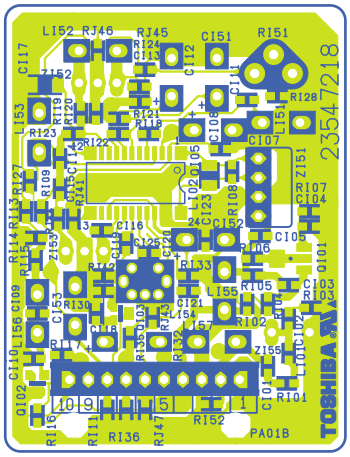


CONV-SEN BOARD PD0079

BOTTOM (FOIL) SIDE

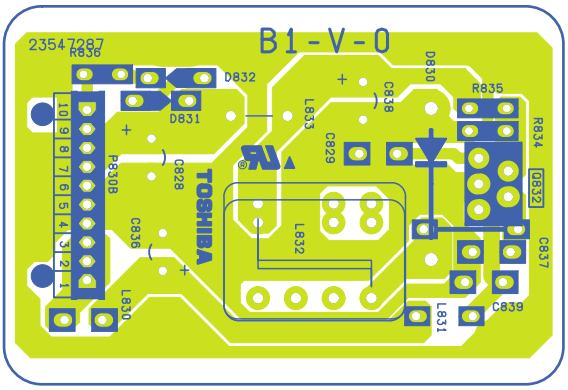
IF BOARD PD1022A

BOTTOM (FOIL) SIDE



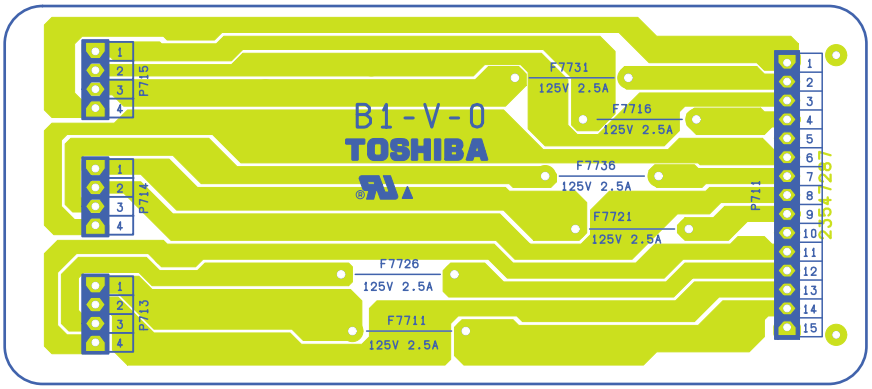
DDCON BOARD PD1163A-1

BOTTOM (FOIL) SIDE



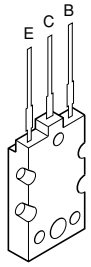
CONVER OUT BOARD PD1163A-2

BOTTOM (FOIL) SIDE

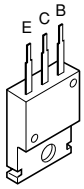


TERMINAL VIEW OF TRANSISTORS

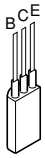
① 2SC5144
2SC5859



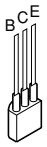
② 2SC3852
2SD1763A
2SC1569
2SC4544
2SA1788
2SA1306
2SA1186A



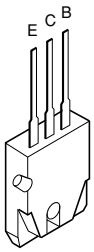
③ 2SC752GTM
2SC2482
2SC2655
2SC4721P



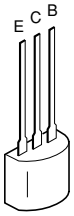
④ 2SC752
2SA562TM
2SA1015
2SC1815
2SC2878
2SC1740S
2SC2120
2SA9335



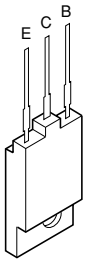
⑤ 2SA1788



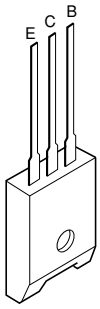
⑥ RN2203
RN2201
RN2004
RN1203
RN1204
RN2204
RN1205
RN1202
RN1201



⑦ 2SD1554
2SD2253
2SD1556
2SD2553
2SC5143



⑧ ON4409



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SCHEMATIC DIAGRAM

MODEL : 51H83 / 57H83 / 65H83

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

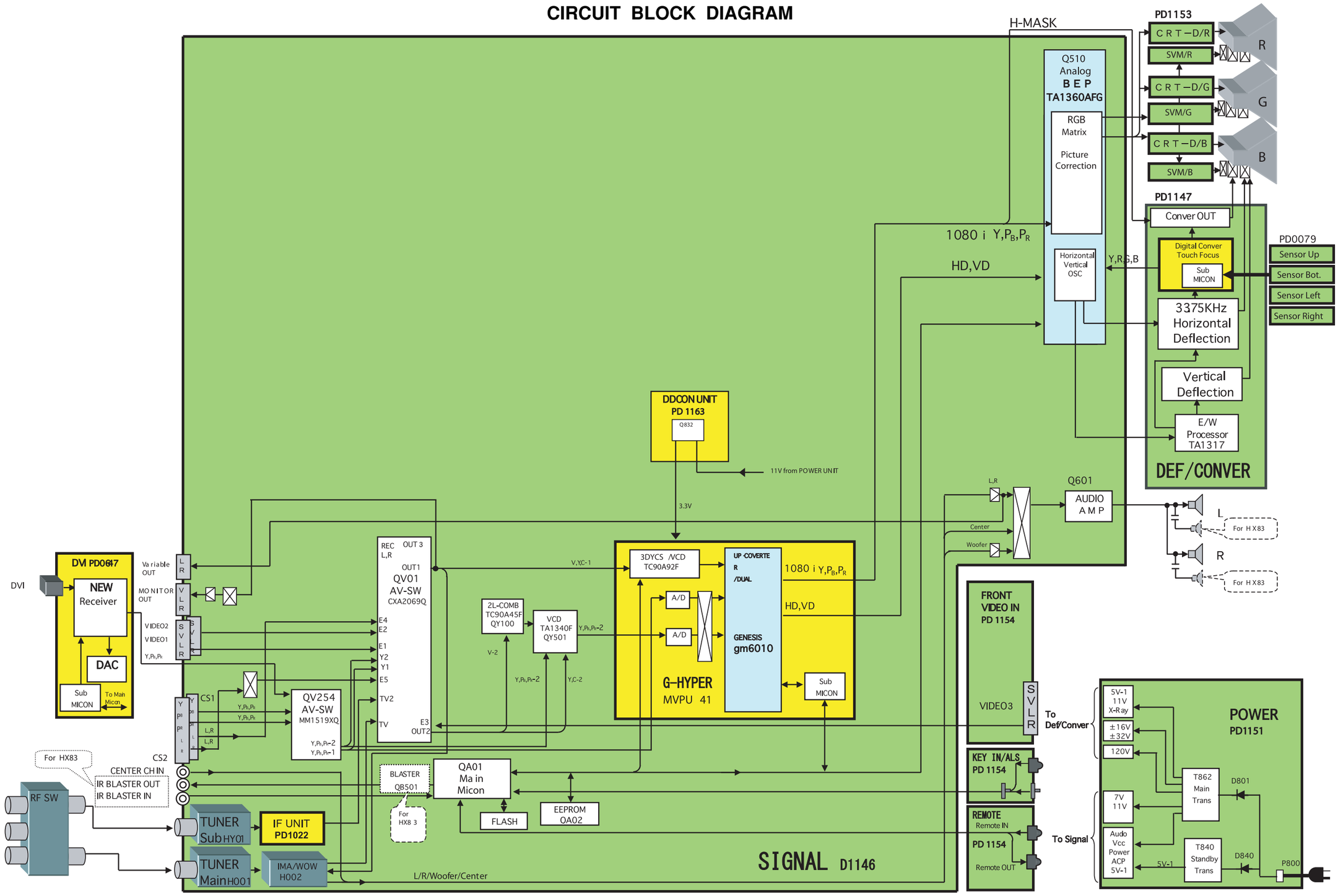
NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
   1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon compsistion of 1/2 watt
   1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
   K = ±10% G = ±2% F = ±1%
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF, and the values more than 1 in pF.
   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   Electolytic capacitor Mylar capacitor
3. The parts indicated with " ⚠ " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage 120 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary ±20% except H.V.

■ **SCHEMATIC DIAGRAM STRUCTURE:**

- SIGNAL Circuit
  - Audio [SHEET - 1/9] 1/22
  - AV-1 [SHEET - 2/9] 2/22
  - Maicon [SHEET - 3/9] 3/22
  - REGULATOR [SHEET - 4/9] 4/22
  - Video [SHEET - 5/9] 5/22
  - AV-2 [SHEET - 6/9] 6/22
  - AV-3 [SHEET - 7/9] 7/22
  - IF [SHEET - 8/9] 8/22
  - SYNC OUT [SHEET - 9/9] 9/22
- POWER Circuit
  - (1/2) [SHEET - 1/2] 10/22
  - (2/2) [SHEET - 2/2] 11/22
- DEF / CONVER Circuit
  - Vertical [SHEET - 1/3] 12/22
  - DEF [SHEET - 2/3] 13/22
  - CONVER-OUT [SHEET - 3/3] 14/22
- CRT / SVM Circuit (51") 15/22
- CRT / SVM Circuit (57"/65")
  - CRT-DRIVE [SHEET - 1/2] 16/22
  - SVM [SHEET - 2/2] 17/22
- DD-CON Circuit
  - (1/2) [SHEET - 1/2] 18/22
  - CONVER-OUT (2/2) [SHEET - 2/2] 19/22
- FRONT Circuit 20/22
- T. FOCUS-SENSOR Circuit 21/22
- IF Circuit 22/22

CIRCUIT BLOCK DIAGRAM



SPECIFICATIONS

Television System
NTSC standard

Channel Coverage
VHF: 2 through 13
UHF:14 through 69
Cable TV: Mid band (A-8 through A-1, A through I)
Super band (J through W)
Hyper band (AA through ZZ, AAA, BBB)
Ultra band (65 through 94,100 through 125)

Power Source
120 V AC, 60 Hz

Power Consumption
190 W (average)

Audio Power
20 W + 20 W

Speaker Type
51H83:Two 6-5/16 inches (16 cm) round
57H83:Two 6-5/16 inches (16 cm) round
65H83:Two 6-5/16 inches (16 cm) round

Video/Audio Terminals
S-VIDEO INPUT
Y :1 V(p-p),75 ohm, negative sync.
C :0.286 V(p-p)(burst signal), 75 ohm
VIDEO/AUDIO INPUT
VIDEO: 1 V(p-p),75 ohm, negative sync.
AUDIO: 150 mV (rms)(30% modulation equivalent, 47 k ohm)
ColorStream ® (component video) INPUT
Y :1V(p-p), 75 ohm
P_R:0.7 V(p-p), 75 ohm
P_B:0.7 V(p-p), 75 ohm
AUDIO:150 mV (rms), 47 k ohm
VIDEO/AUDIO OUTPUT
VIDEO: 1 V(p-p), 75 ohm,negative sync.
AUDIO: 150 mV(rms)(30% modulation equivalent, 4.7 k ohm)
VARIABLE AUDIO OUTPUT
0–300 mV(rms)(30%modulation equivalent, 4.7 k ohm)
AUDIO CENTER CHANNEL INPUT
300 mV(rms)(30% modulation equivalent, 10 k ohm)
DVI/HDCP INPUT
HDCP compliant
E-EDID*1 1.3 compliant
DVI-D uncompressed, high-speed, digital single-link connection
Suggested scan rates:1080i, 480p, 480i

Dimensions

51H83:	Width	47-3/5 inches (1,209 mm)
	Height	50-2/5 inches (1,280 mm)
	Depth	22 inches (570 mm)
57H83:	Width	52-3/4 inches (1,340 mm)
	Height	55-1/16 inches (1,399 mm)
	Depth	23-7/8 inches (606 mm)
65H83:	Width	60 inches (1,522 mm)
	Height	59-7/8 inches (1,521 mm)
	Depth	25-1/5 inches (640 mm)

Mass
51H83:xxx lbs (xx kg)
57H83:230 lbs (105.0 kg)
65H83:xxx lbs (xx kg)

Supplied Accessories
Remote Control with 2 size “AA ” alkaline batteries

*1 E-EDID = Enhanced-Extended Display Identification
*2 Design and specifications are subject to change without notice.
*3 Please refer to owner's manual in detail.

– END –

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

SCHEMATIC DIAGRAM

MODEL : 51H83 / 57H83 / 65H83

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

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   All capacitors are ceramic 50V, unless otherwise noted as the following marks.
   —|+|— Electolytic capacitor —|M|— Mylar capacitor
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  - AV-1 [SHEET - 2/9] 2/22
  - Maicon [SHEET - 3/9] 3/22
  - REGULATOR [SHEET - 4/9] 4/22
  - Video [SHEET - 5/9] 5/22
  - AV-2 [SHEET - 6/9] 6/22
  - AV-3 [SHEET - 7/9] 7/22
  - IF [SHEET - 8/9] 8/22
  - SYNC OUT [SHEET - 9/9] 9/22
- POWER Circuit
  - (1/2) [SHEET - 1/2] 10/22
  - (2/2) [SHEET - 2/2] 11/22
- DEF / CONVER Circuit
  - Vertical [SHEET - 1/3] 12/22
  - DEF [SHEET - 2/3] 13/22
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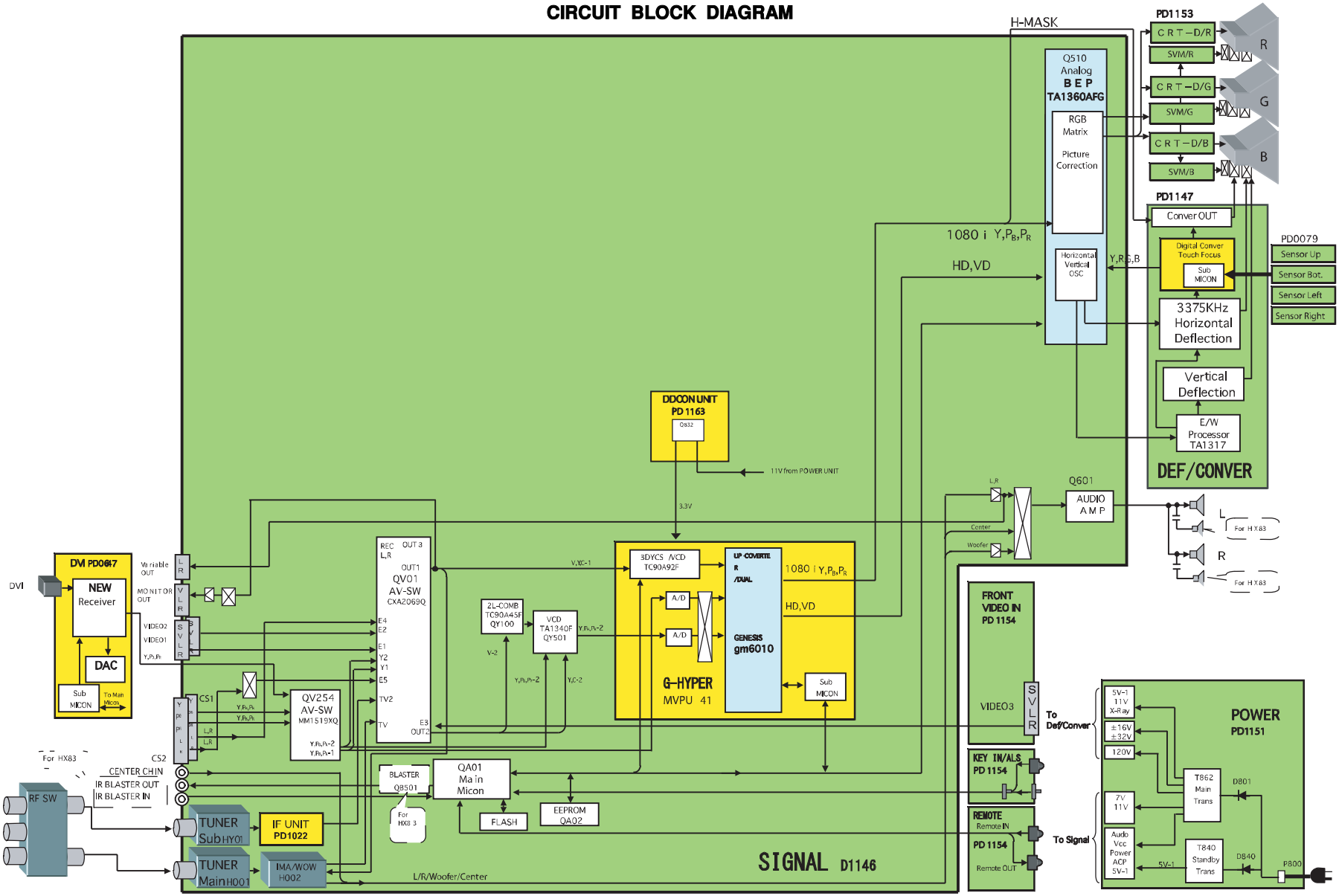
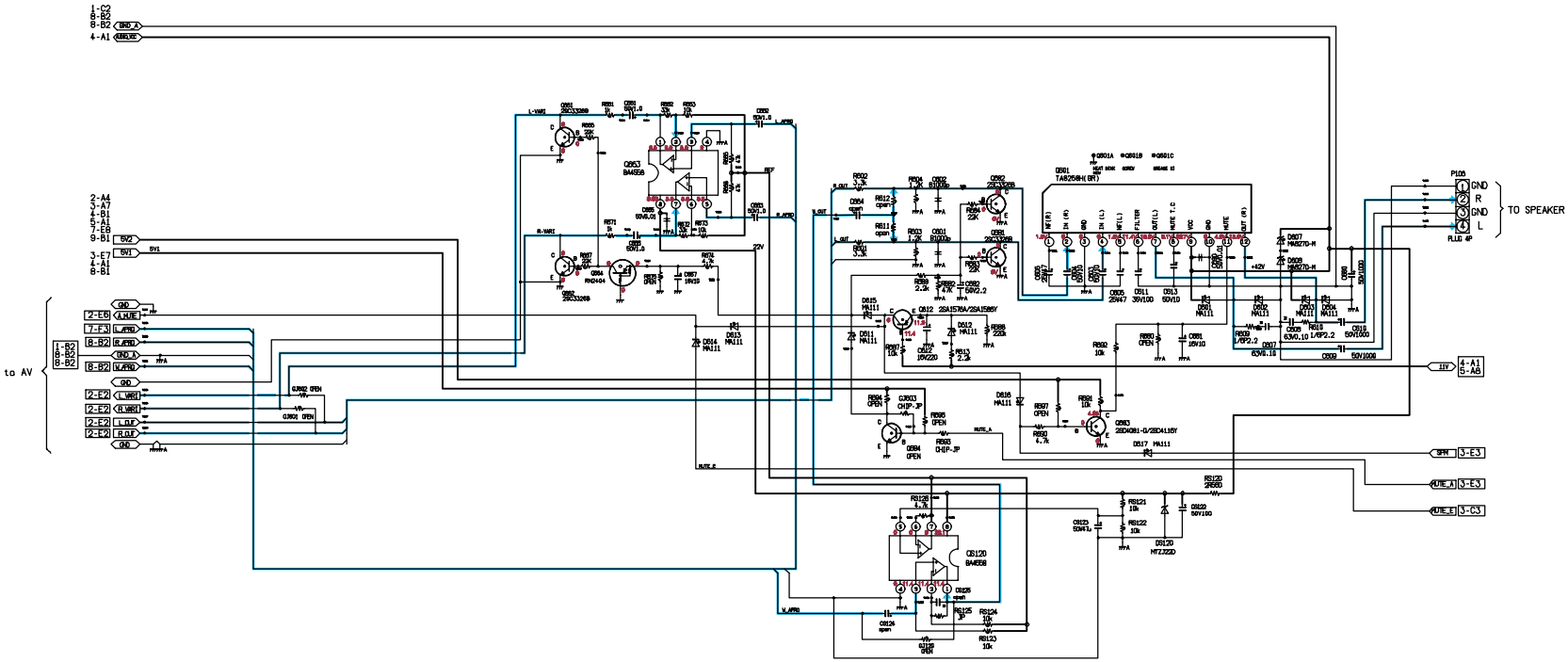
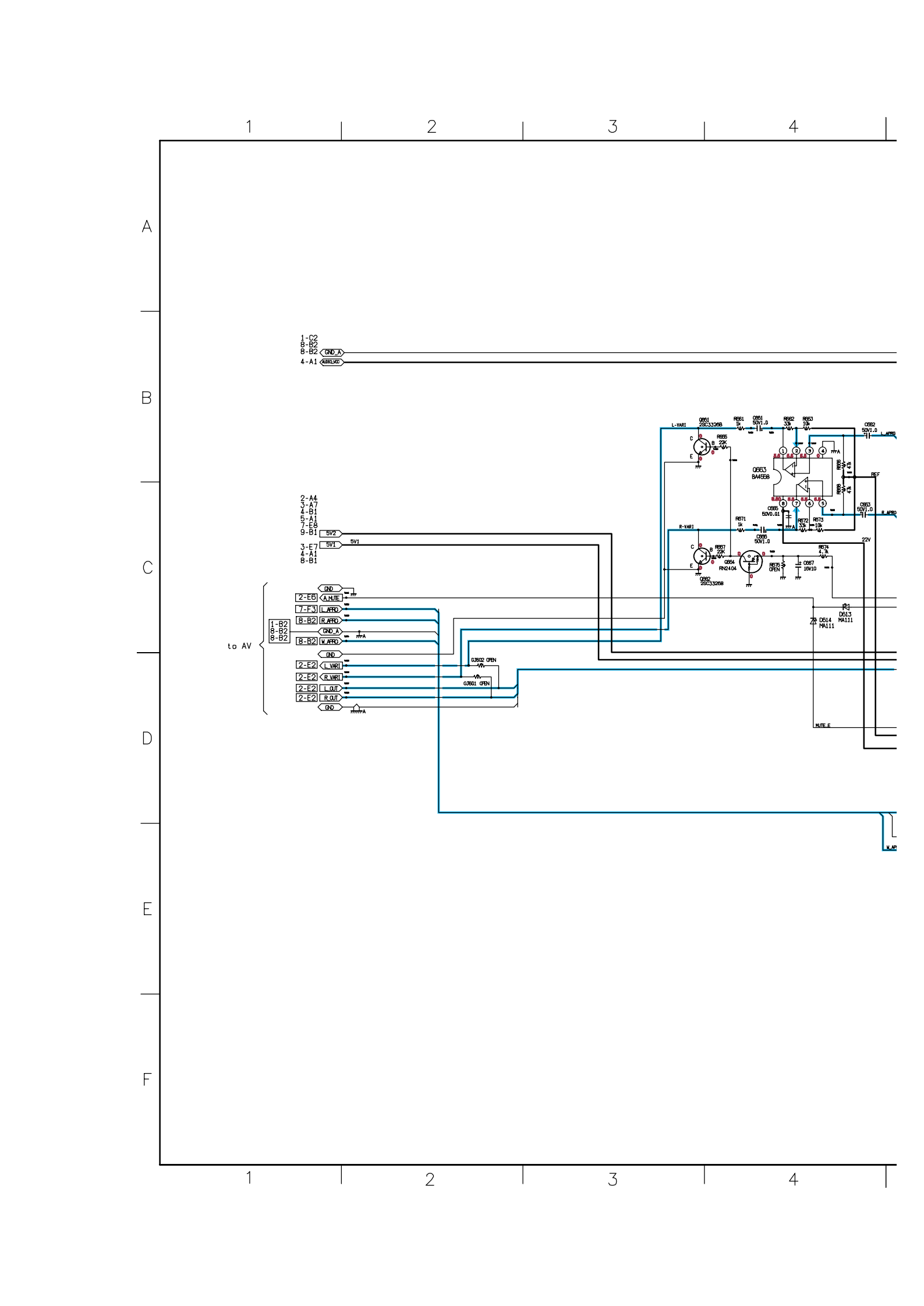
  - (1/2) [SHEET - 1/2] 18/22
  - CONVER-OUT (2/2) [SHEET - 2/2] 19/22
- FRONT Circuit 20/22
- T. FOCUS-SENSOR Circuit 21/22
- IF Circuit 22/22

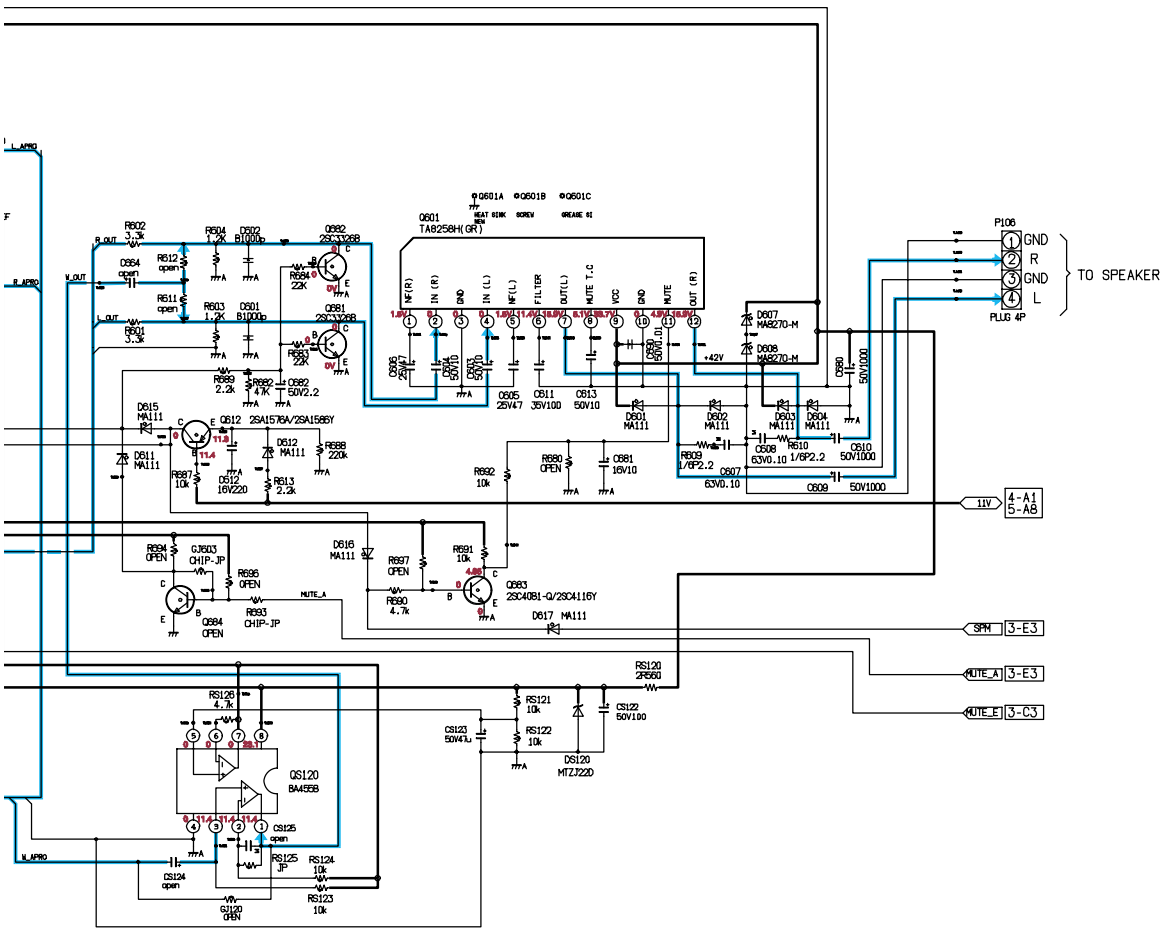
CIRCUIT BLOCK DIAGRAM



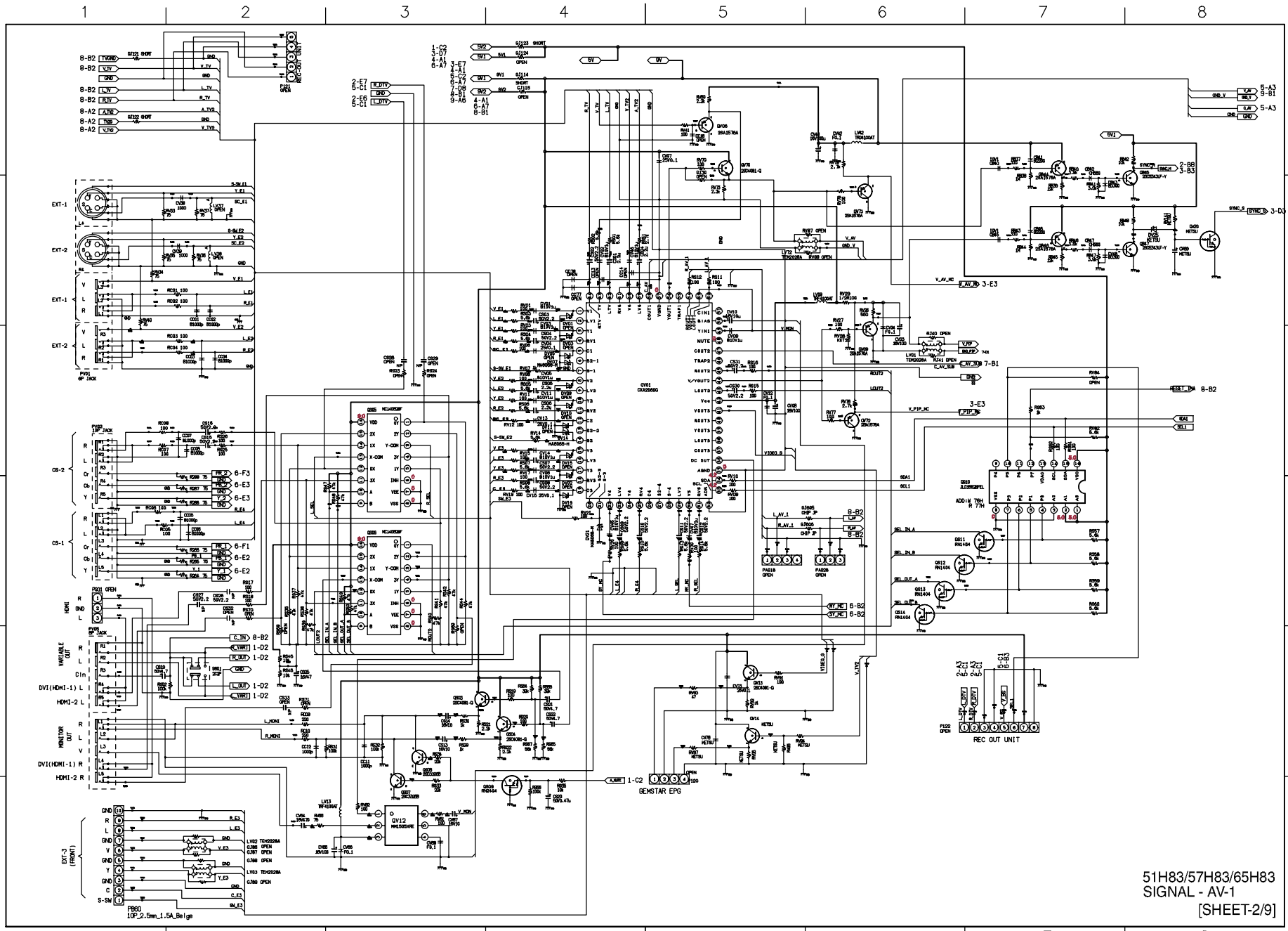


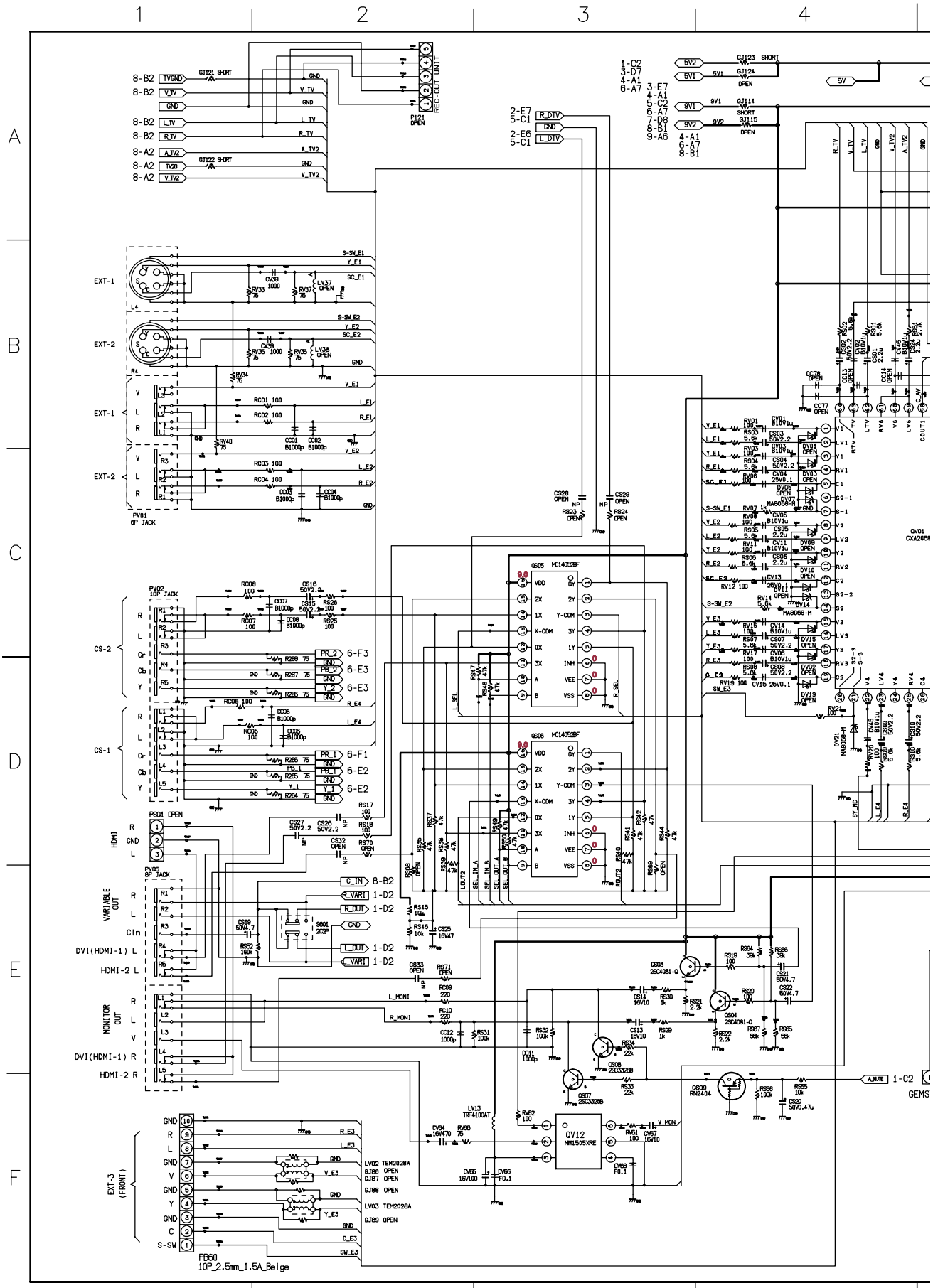
51H83/57H83/65H83
SIGNAL - Audio
[SHEET-1/9]

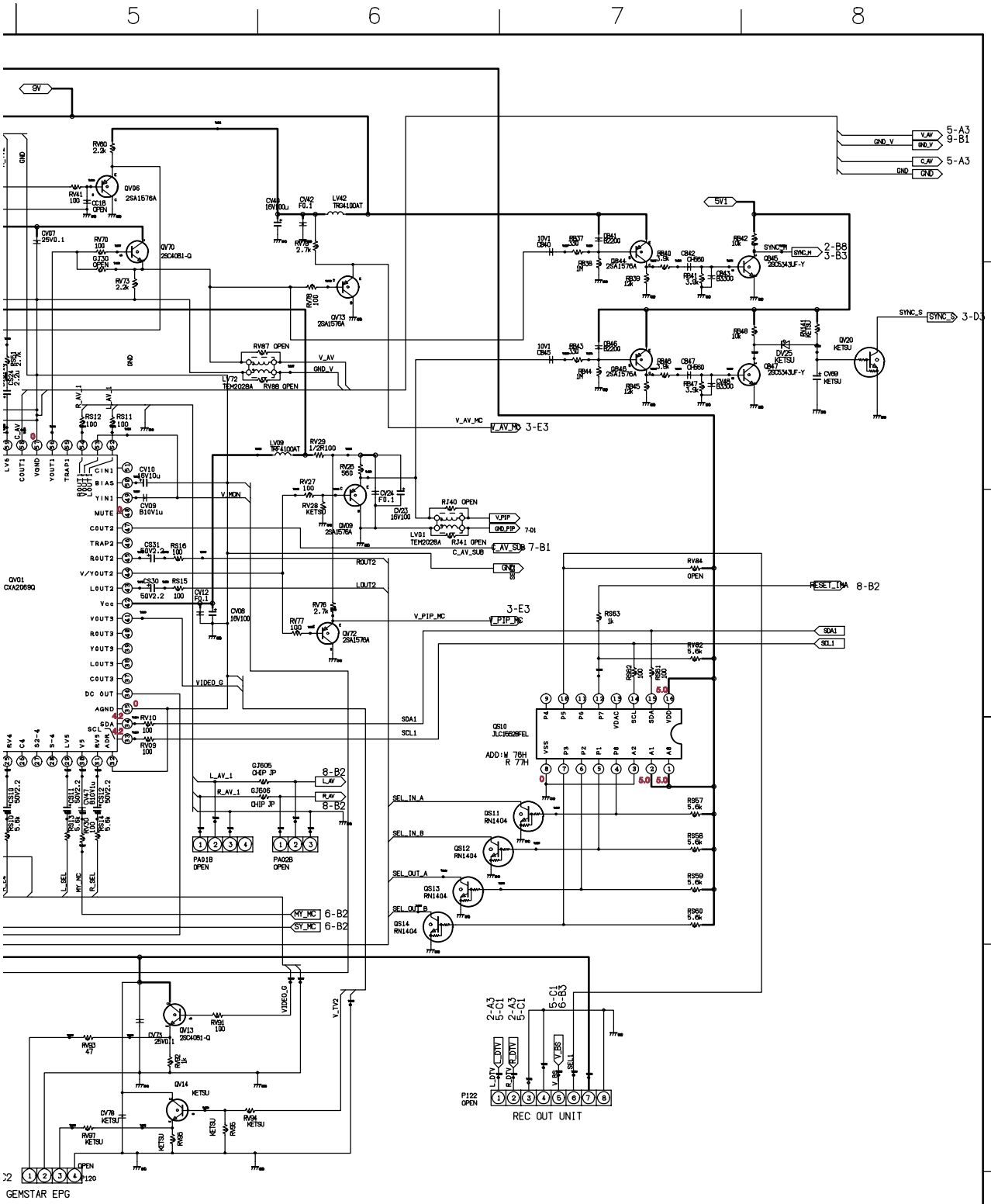

1-C2
8-B2
8-B2 GND_A
4-A1 AUDIO_VCC
2-A4
3-A7
4-B1
5-A1
7-E8
9-B1 5V2
3-E7 5V1
4-A1
8-B1
to AV
1-B2
8-B2
8-B2
2-E6 A_MUTE
7-F3 L_AFRO
8-B2 R_AFRO
8-B2 GND_A
8-B2 M_AFRO
2-E2 L_VARI
2-E2 R_VARI
2-E2 L_OUT
2-E2 R_OUT
GND
GJ602 OPEN
GJ601 OPEN
L-VARI
Q851 2SC3326B
R851 1k
C851 50V1.0
R852 33k
R853 10k
C852 50V1.0
L_AFRO
R855 22k
Q853 BA4558
R858 4.7k
R859 4.7k
REF
C855 50V0.01
C853 50V1.0
R_AFRO
R-VARI
R871 1k
R872 33k
R873 10k
C855 50V1.0
22V
R857 22k
Q854 RN2404
R874 4.7k
R875 OPEN
C857 16V10
Q852 2SC3326B
D813 MA111
D814 MA111
MUTE_E
M_AF

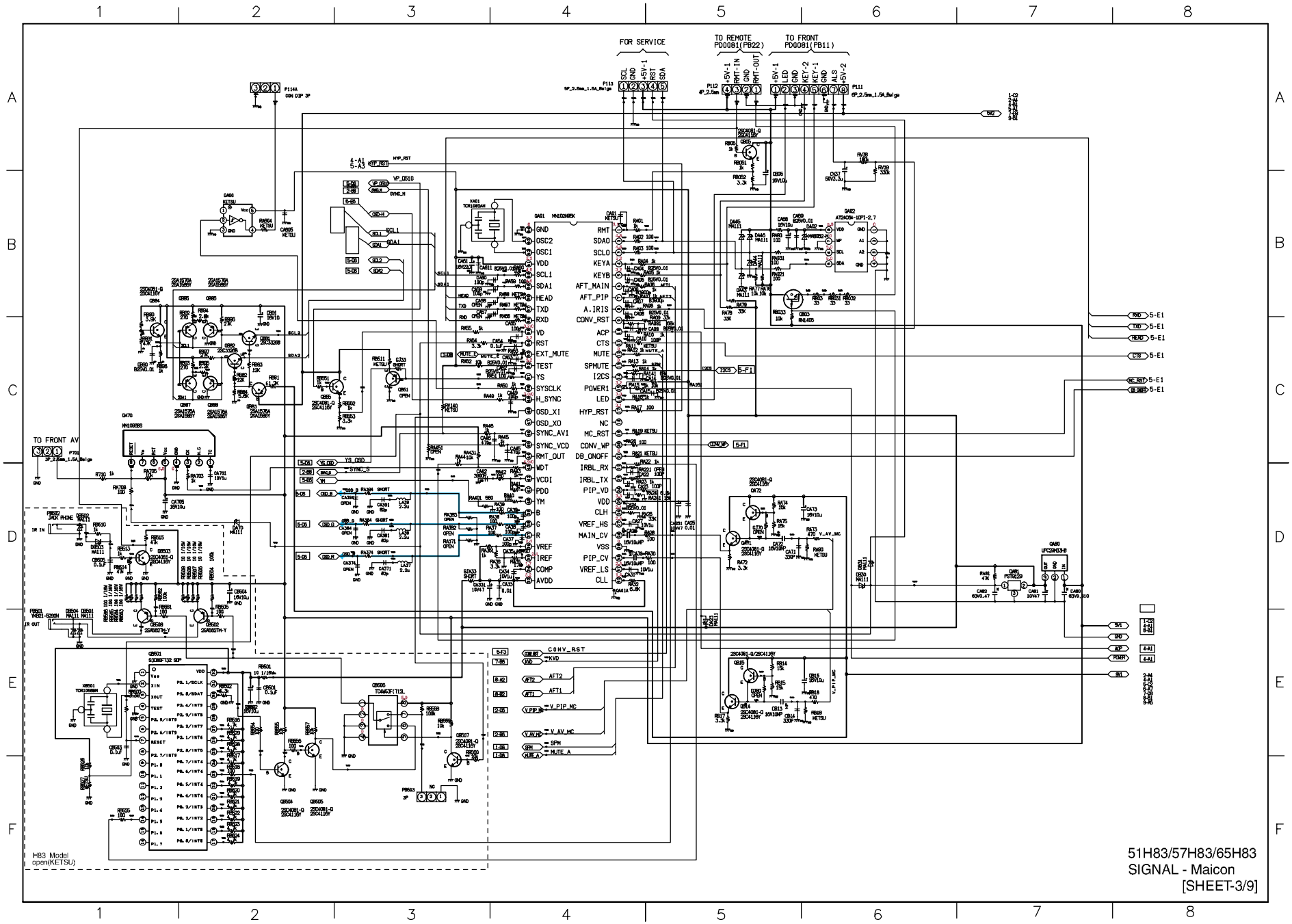


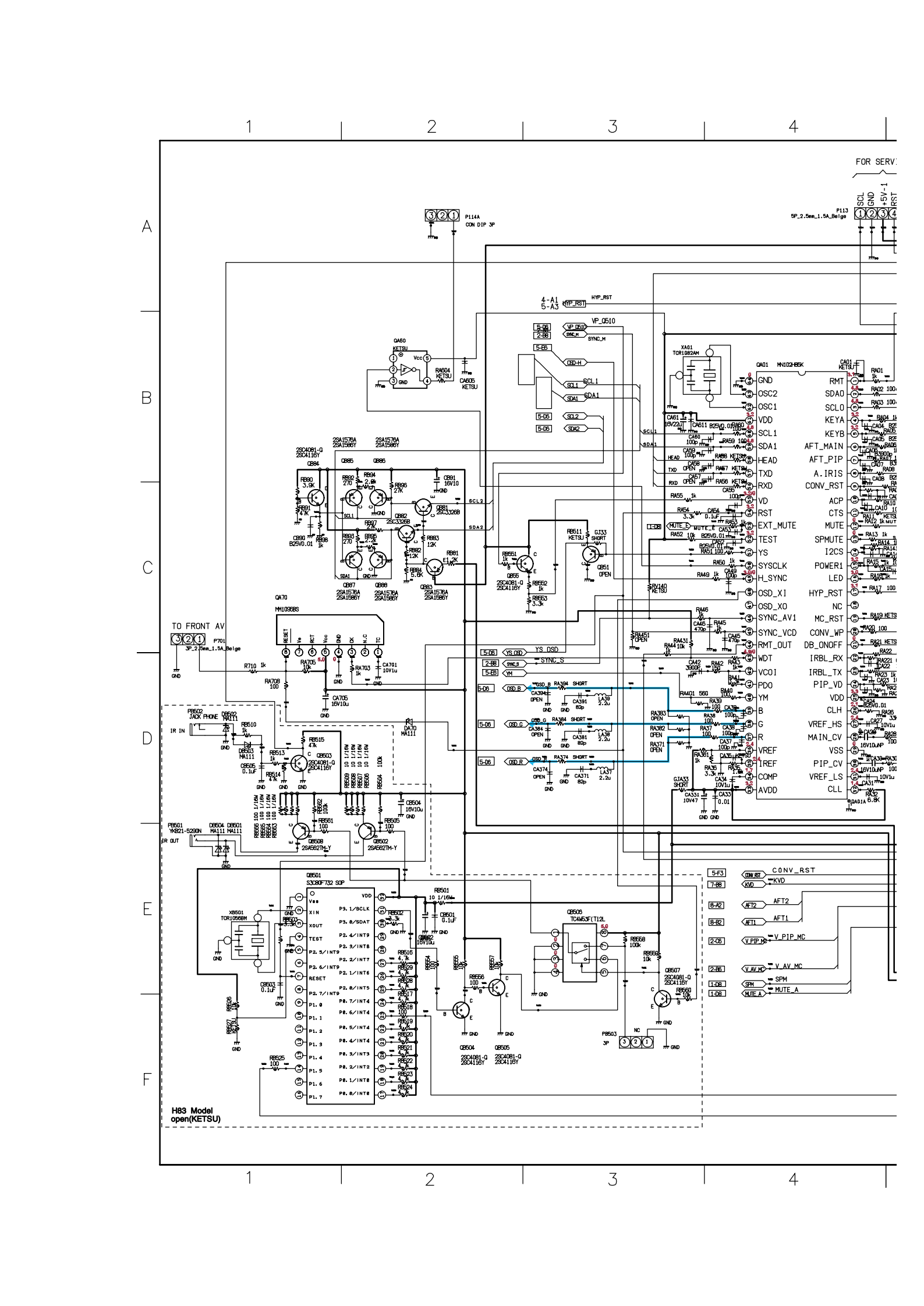
51H83/57H83/65H83
SIGNAL - Audio
[SHEET-1/9]

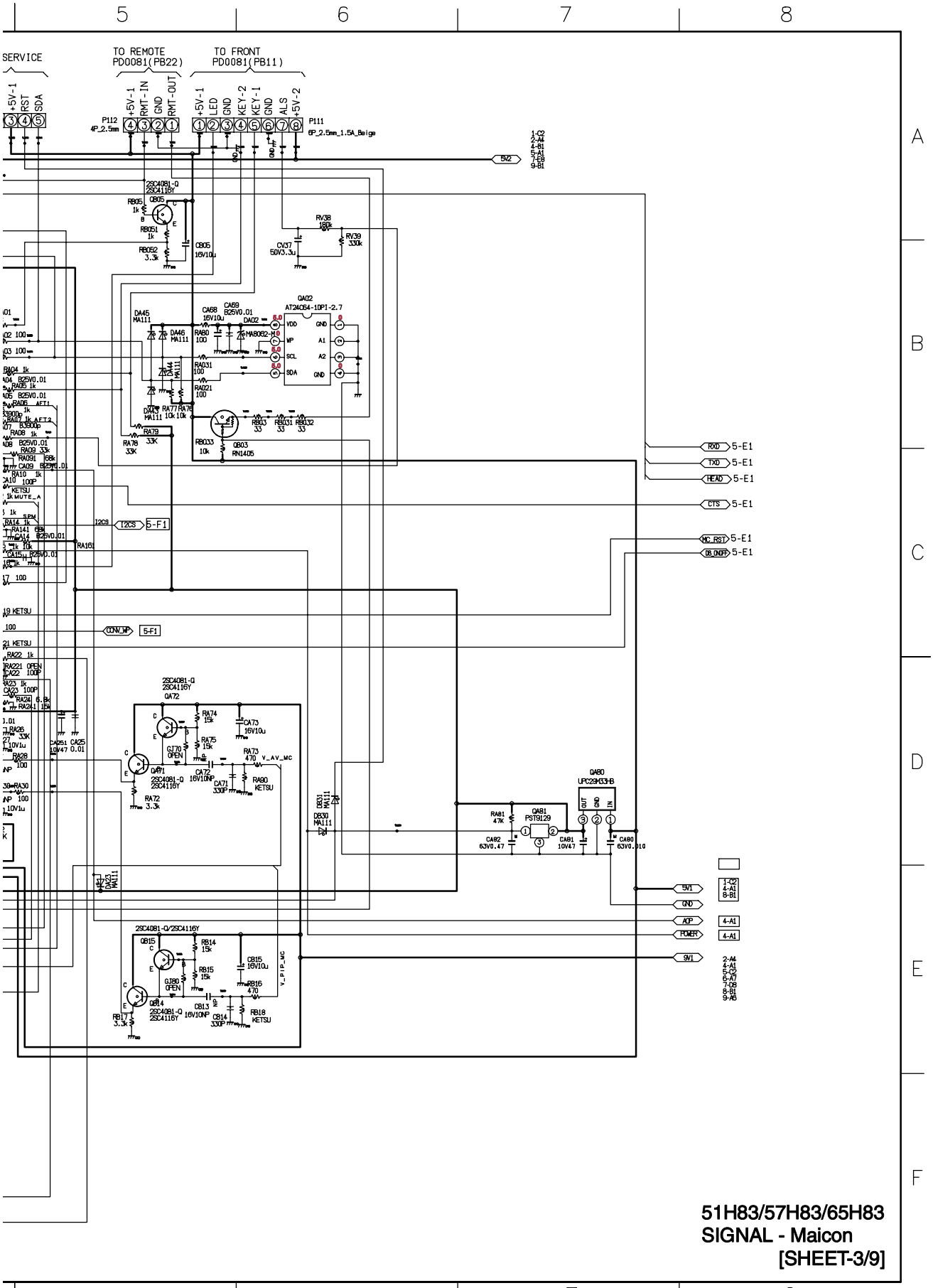

51H83/57H83/65H83
SIGNAL - AV-1
[SHEET-2/9]
REC OUT UNIT
GEMSTAR EPG
EXT-1
EXT-2
CS-1
CS-2
HDMI1
VARIABLE OUT
MONITOR OUT
EXT-3 (FRONT)
P860
10P_2.5mm_1.5A_Beige


1
2
3
4
A
B
C
D
E
F
REC-OUT UNIT
PJ121 OPEN
GJ121 SHORT
GJ122 SHORT
GJ123 SHORT
GJ124 OPEN
GJ114 SHORT
GJ115 OPEN
EXT-1
EXT-2
PV01 6P JACK
PV02 10P JACK
PV05 9P JACK
CS-2
CS-1
HDMI
VARIABLE OUT
MONITOR OUT
DVI(HDMI-1) L
HDMI-2 L
DVI(HDMI-1) R
HDMI-2 R
EXT-3 (FRONT)
PB60 10P_2.5mm_1.5A_Beige
QS05 MC14052BF
QS06 MC14052BF
QV12 MM1505XRE
LV13 TRF4100AT
A_MUTE
GEMS

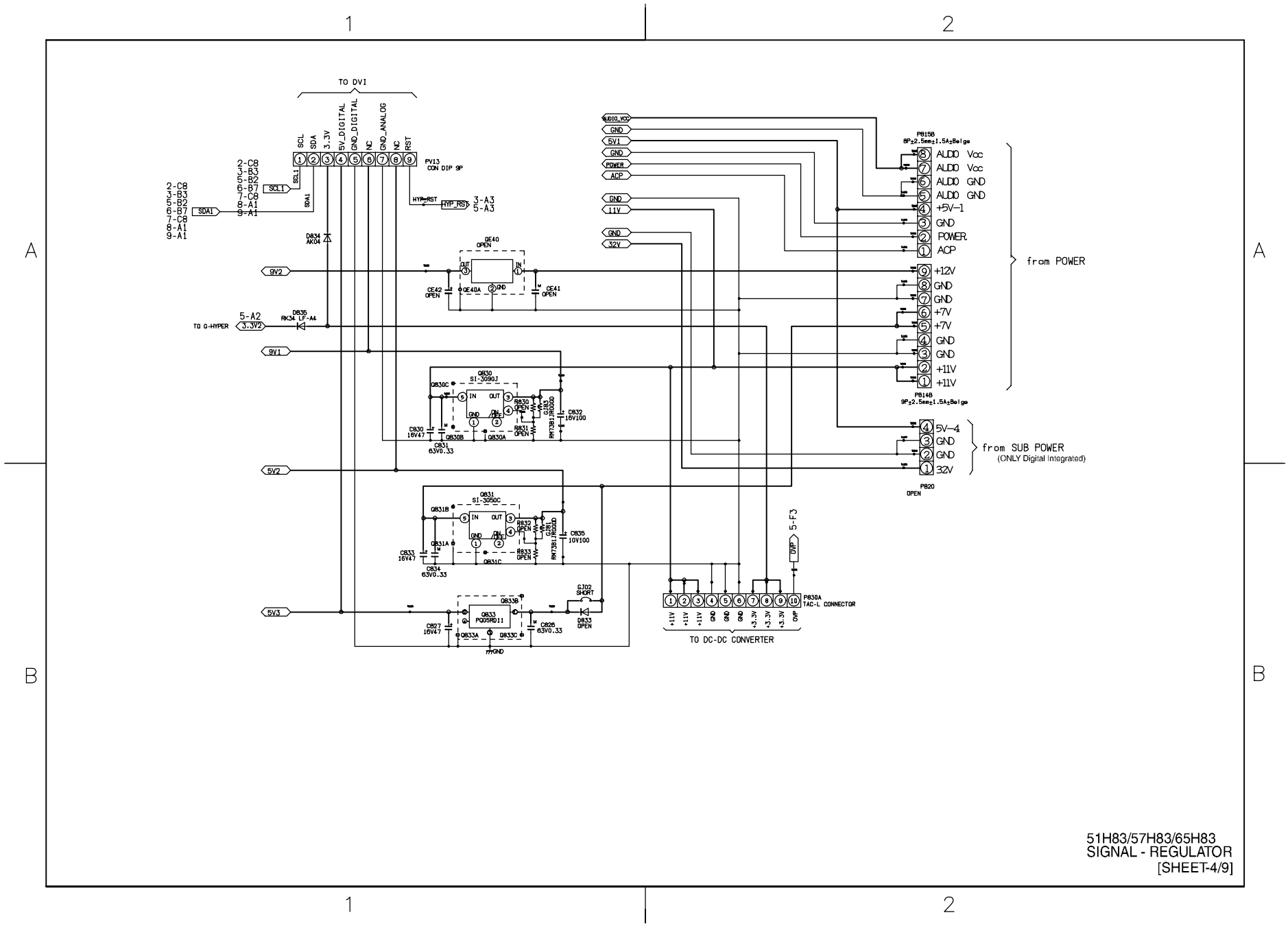

5
6
7
8
A
B
C
D
E
F
9V
GND
V_AV
GND_V
C_AV
5-A3
9-B1
5-A3
2-B8
3-B3
3-D3
3-E3
7-B1
8-B2
6-B2
5V1
SYNC_S
SYNC_H
V_AV_MC
V_PIP_MC
V_MON
RESET_IN
SDA1
SCL1
VIDEO_G
V_TV2
RJ40 OPEN
RJ41 OPEN
RV87 OPEN
RV88 OPEN
QV01
CXA2069Q
QS10
JLC1562BFEL
ADD:W 76H
R 77H
QS11
RN1404
QS12
RN1404
QS13
RN1404
QS14
RN1404
SEL_IN_A
SEL_IN_B
SEL_OUT_A
SEL_OUT_B
REC OUT UNIT
GEMSTAR EPG
51H83/57H83/65H83
SIGNAL - AV-1
[SHEET-2/9]

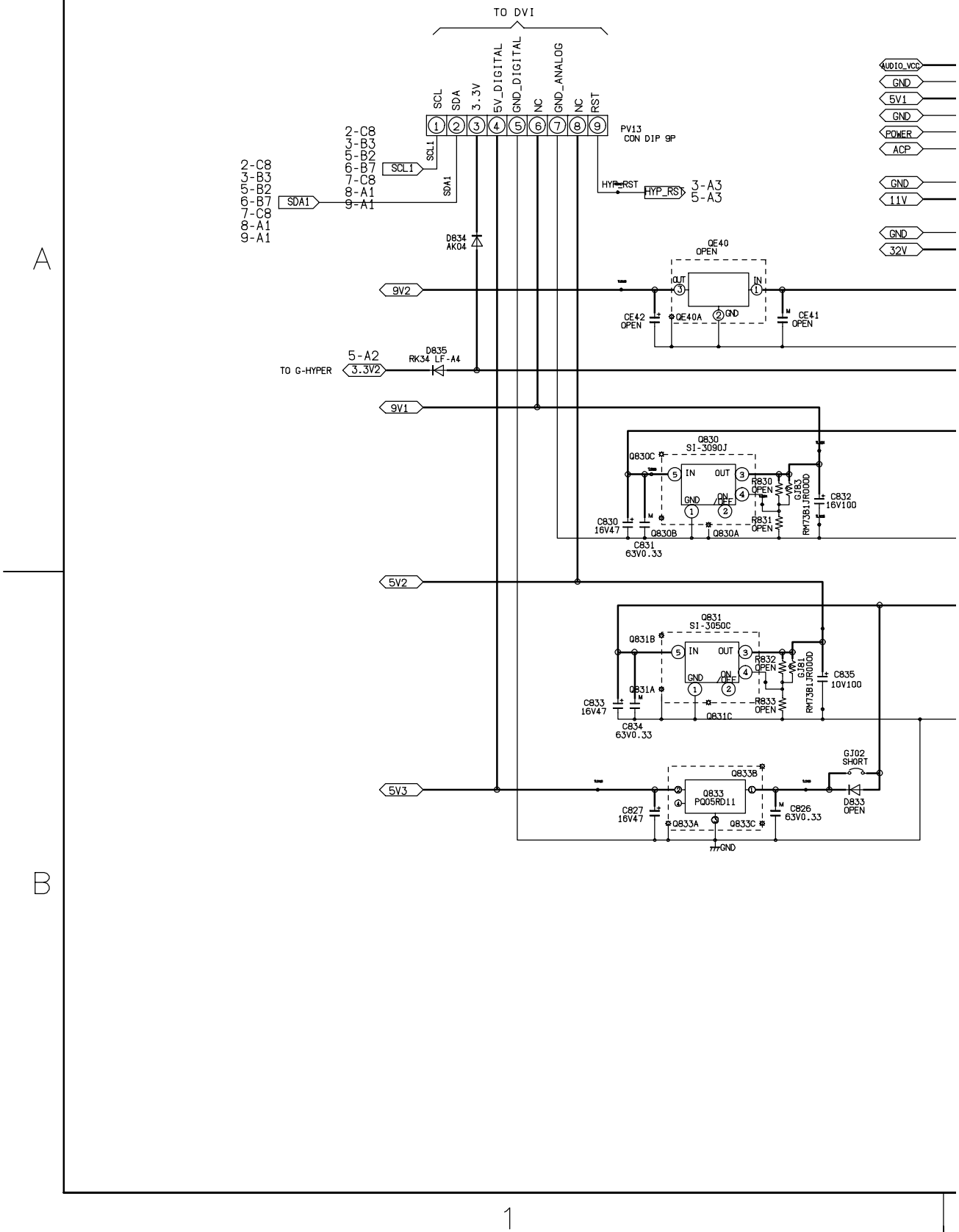

FOR SERVICE
TO REMOTE PD0081(PB22)
TO FRONT PD0081(PB11)
TO FRONT AV
H83 Model open(KETSU)
51H83/57H83/65H83
SIGNAL - Maicon
[SHEET-3/9]

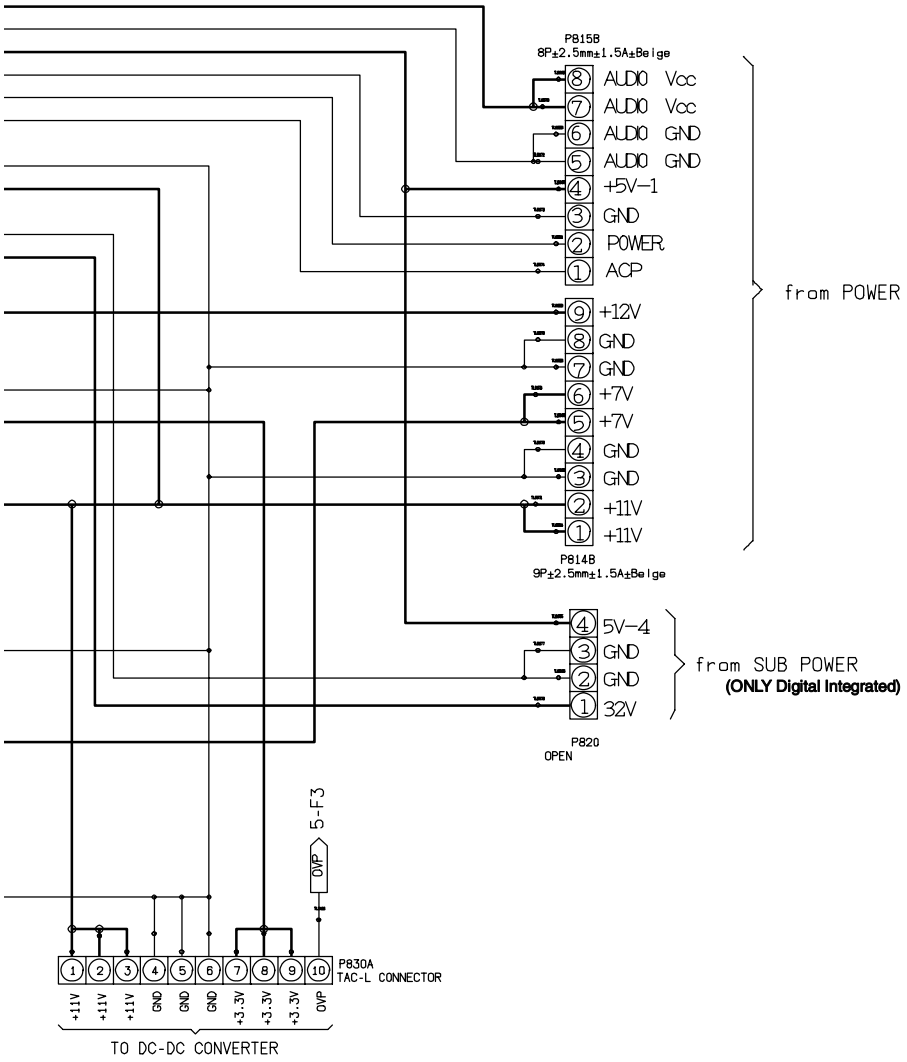

FOR SERV
P114A
CON DIP 3P
P113
5P_2.5mm_1.5A_Beige
SCL
GND
+5V-1
RST
HYP_RST
VP_0510
SYNC_M
OSD-H
SCL1
SDA1
SCL2
SDA2
XA01
TCR1082AM
CA01
MN102H85K
GND
OSC2
OSC1
VDD
SCL1
SDA1
HEAD
TXD
RXD
VD
RST
EXT_MUTE
TEST
YS
SYSCLK
H_SYNC
OSD_XI
OSD_XO
SYNC_AV1
SYNC_VCD
RMT_OUT
WDT
VCOI
PDO
YM
B
G
R
VREF
IREF
COMP
AVDD
RMT
SDAO
SCLO
KEYA
KEYB
AFT_MAIN
AFT_PIP
A.IRIS
CONV_RST
ACP
CTS
MUTE
SPMUTE
I2CS
POWER1
LED
HYP_RST
NC
MC_RST
CONV_WP
DB_ONOFF
IRBL_RX
IRBL_TX
PIP_VD
VDD
CLH
VREF_HS
MAIN_CV
VSS
PIP_CV
VREF_LS
CLL
QA60
KETSU
RA604
KETSU
CA605
KETSU
TO FRONT AV
P701
3P_2.5mm_1.5A_Beige
QA70
MM1096BS
RESET
Vs
RST
Vcc
GND
CK
N.C
TC
YS_OSD
SYNC_S
OSD_B
OSD_G
OSD_R
JACK PHONE
IR IN
IR OUT
YX821-5290N
QB501
S3C80F732 SOP
XB501
TCR10566M
QB506
TC4W53F(T12L
QB507
2SC4081-Q
2SC4116Y
QB504
2SC4081-Q
2SC4116Y
QB505
2SC4081-Q
2SC4116Y
PB503
3P
CONV_RST
KVD
AFT2
AFT1
V_PIP_MC
V_AV_MC
SPM
MUTE_A
H83 Model
open(KETSU)



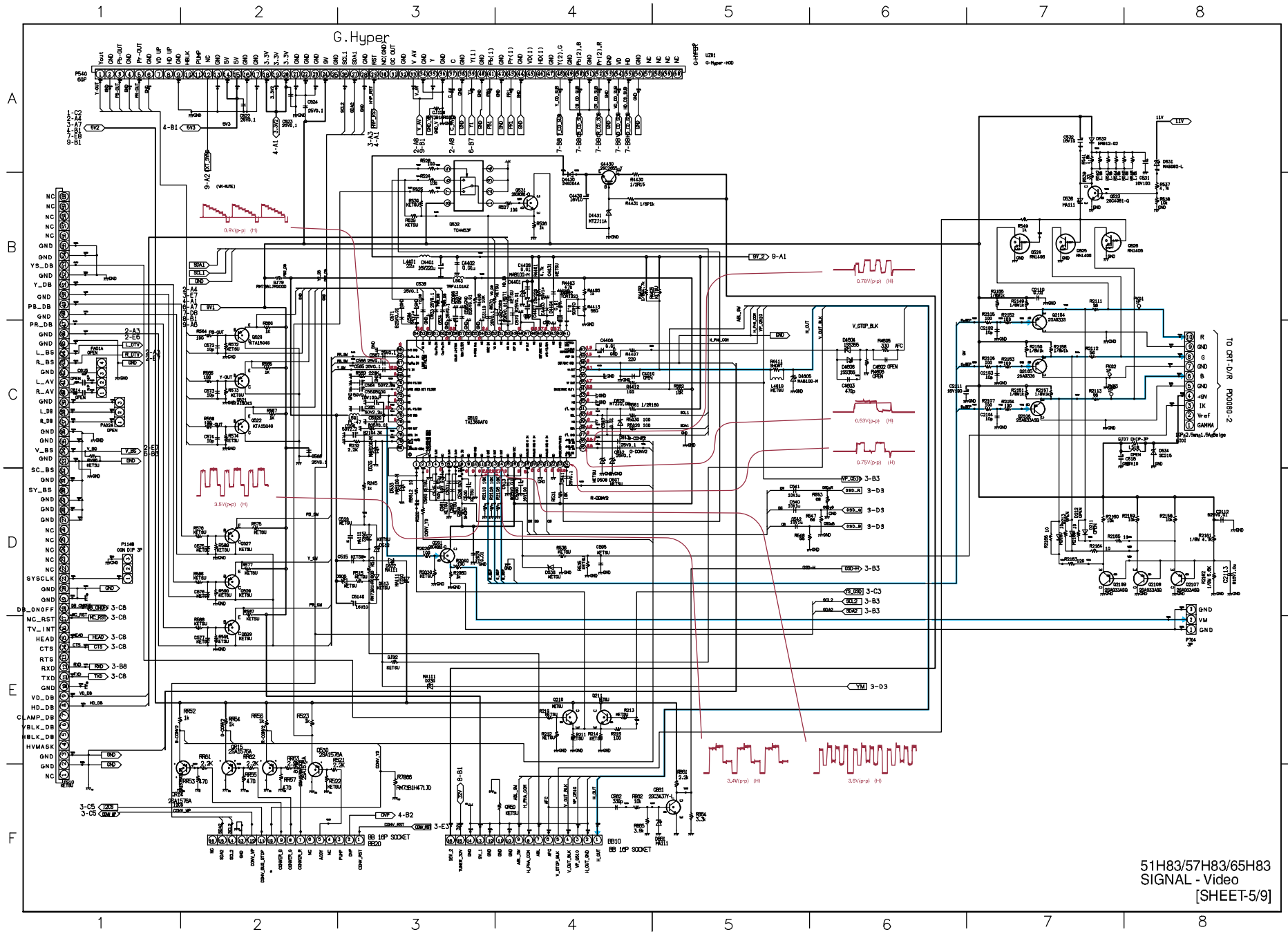
51H83/57H83/65H83
SIGNAL - Maicon
[SHEET-3/9]

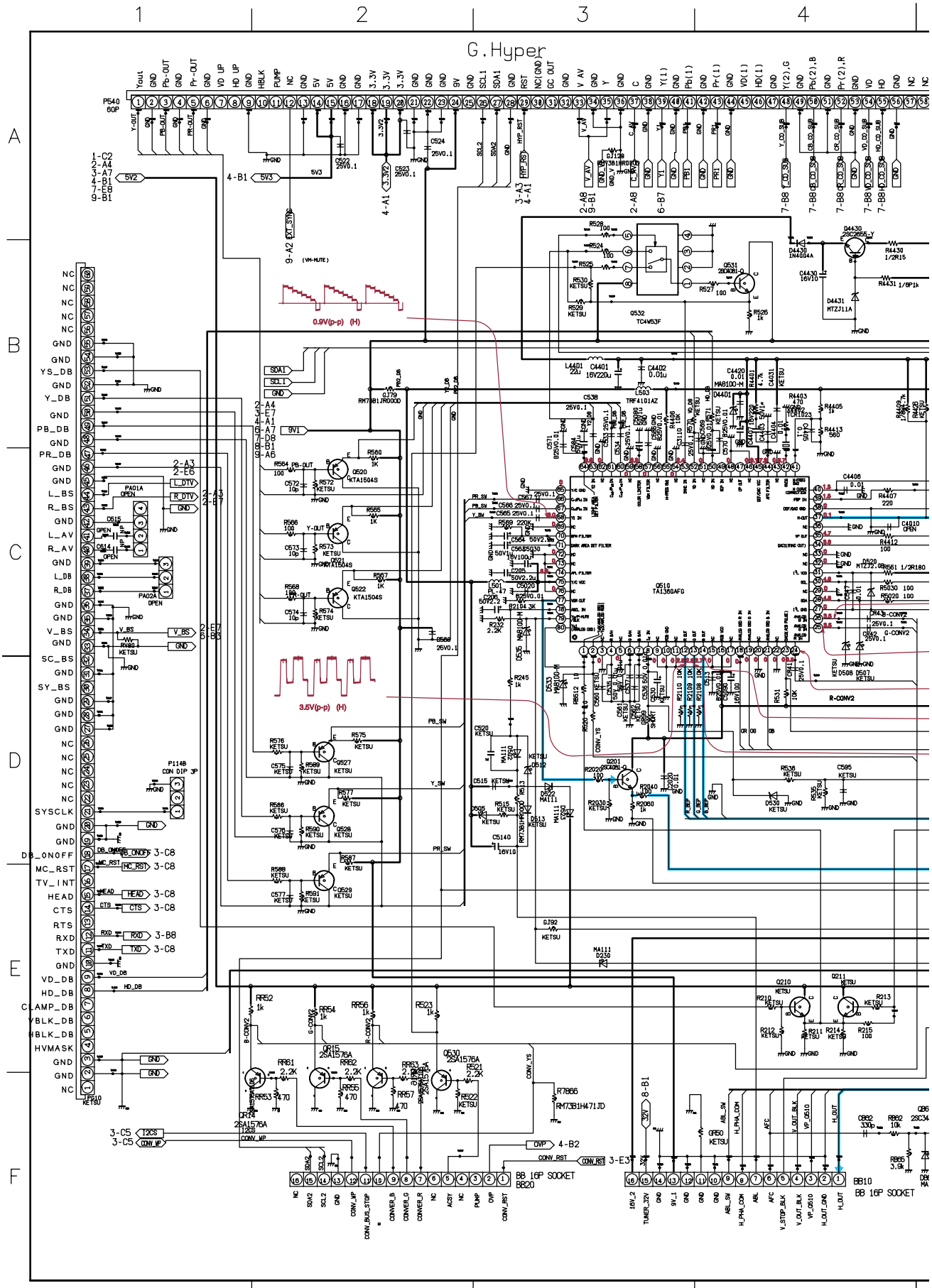

TO DVI
SCL
SDA
3.3V
5V_DIGITAL
GND_DIGITAL
NC
GND_ANALOG
NC
RST
FV13
CON DIP 9P
SCL1
SDA1
HYP_RST
3-A3
5-A3
2-C8
3-B3
5-B2
6-B7
7-C8
8-A1
9-A1
D834
AK04
CE40
OPEN
CE42
OPEN
CE41
OPEN
9V2
5-A2
3.3V2
TO G-HYPER
D835
RK34 LF-A4
9V1
Q830
S1-3090J
C830
16V47
C831
63V0.33
C832
16V100
R830
OPEN
R831
OPEN
5V2
Q831
S1-3050C
C833
16V47
C834
63V0.33
C835
16V100
R832
OPEN
R833
OPEN
5V3
Q833
PQ05RD11
C827
16V47
C826
63V0.33
GJ02
SHORT
D833
OPEN
AUDIO_VCC
GND
5V1
GND
POWER
ACP
GND
11V
GND
32V
P815B
AUDIO Vcc
AUDIO Vcc
AUDIO GND
AUDIO GND
+5V-1
GND
POWER
ACP
from POWER
+12V
GND
GND
+7V
+7V
GND
GND
+11V
+11V
P814B
5V-4
GND
GND
32V
from SUB POWER
(ONLY Digital Integrated)
P820
OPEN
OVP
5-F3
P830A
TAC-L CONNECTOR
+11V
+11V
+11V
GND
GND
+3.3V
+3.3V
+3.3V
OVP
TO DC-DC CONVERTER
51H83/57H83/65H83
SIGNAL - REGULATOR
[SHEET-4/9]

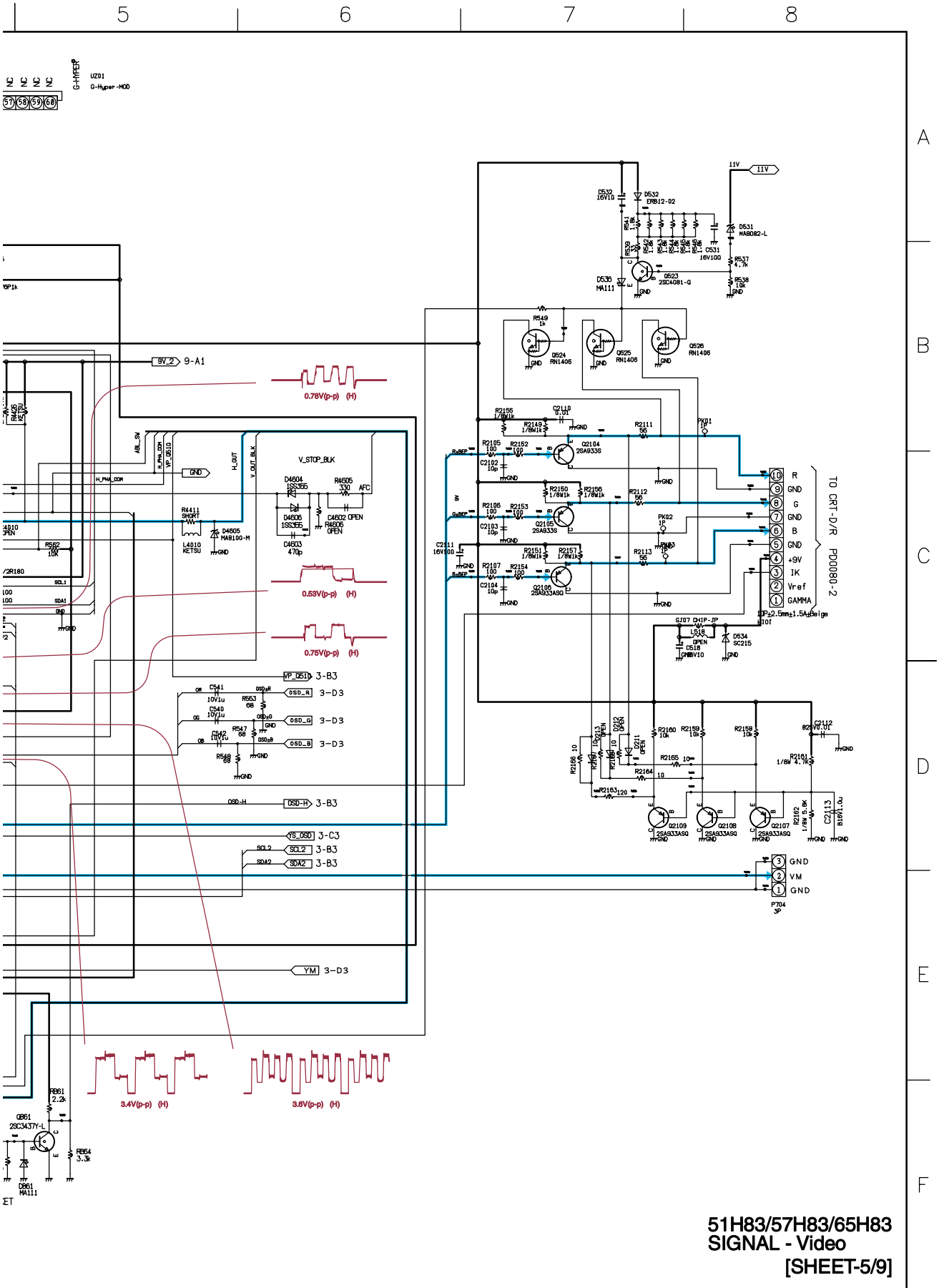

TO DVI
SCL
SDA
3.3V
5V_DIGITAL
GND_DIGITAL
NC
GND_ANALOG
NC
RST
PV13
CON DIP 9P
2-C8
3-B3
5-B2
6-B7
7-C8
8-A1
9-A1
SCL1
SDA1
HYP_RST
3-A3
5-A3
AUDIO_VCC
GND
5V1
GND
POWER
ACP
GND
11V
GND
32V
D834
AK04
QE40
OPEN
9V2
CE42
OPEN
QE40A
CE41
OPEN
5-A2
TO G-HYPER
3.3V2
D835
RK34 LF-A4
9V1
Q830
SI-3090J
Q830C
R830
OPEN
GJ83
RM73B1JR000D
C832
16V100
C830
16V47
Q830B
Q830A
R831
OPEN
C831
63V0.33
5V2
Q831
SI-3050C
Q831B
R832
OPEN
GJ81
RM73B1JR000D
C835
10V100
Q831A
C833
16V47
R833
OPEN
Q831C
C834
63V0.33
GJ02
SHORT
5V3
Q833B
Q833
PQ05RD11
D833
OPEN
C827
16V47
Q833A
Q833C
C826
63V0.33
GND

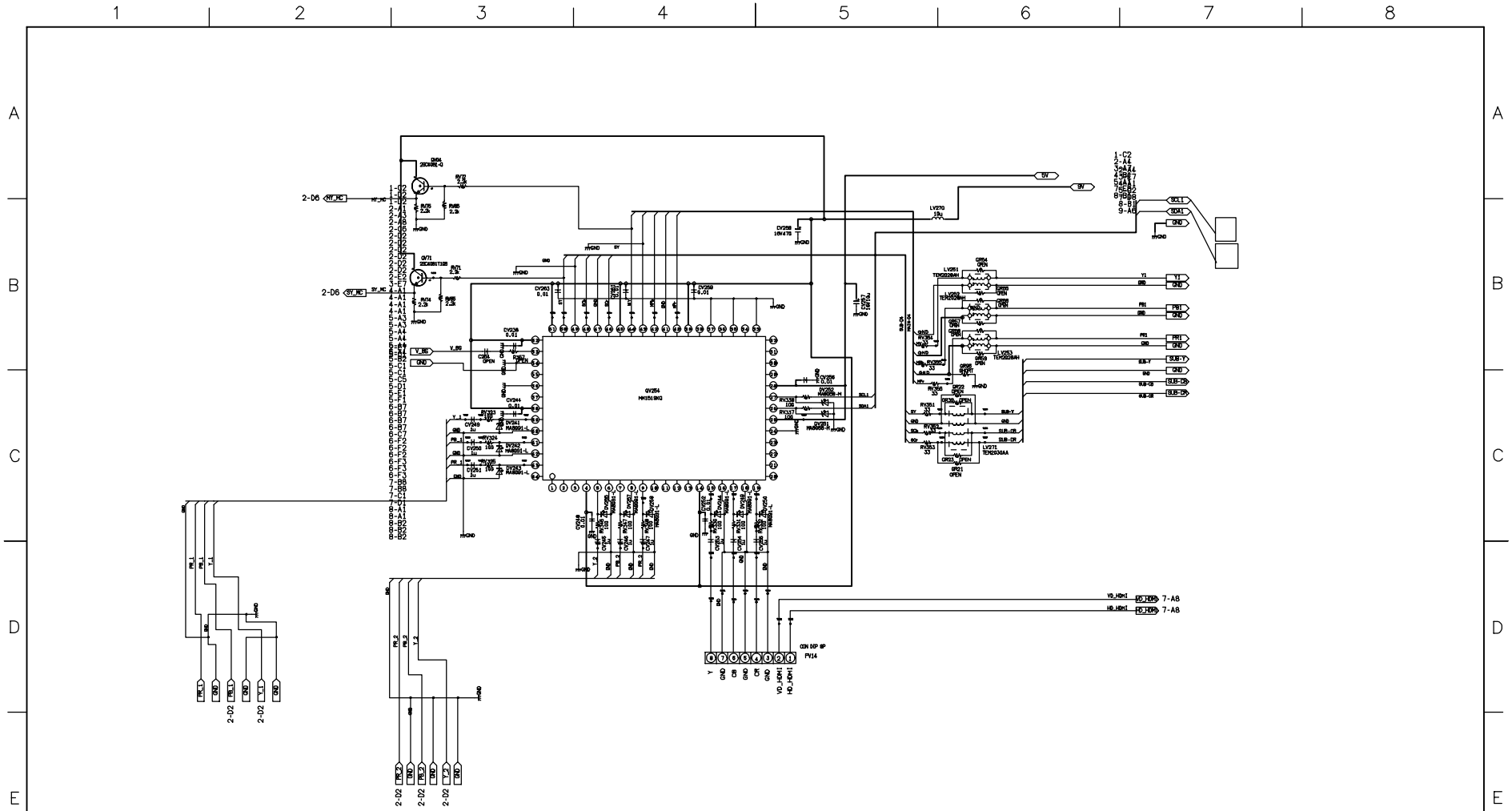


51H83/57H83/65H83
SIGNAL - REGULATOR
[SHEET-4/9]

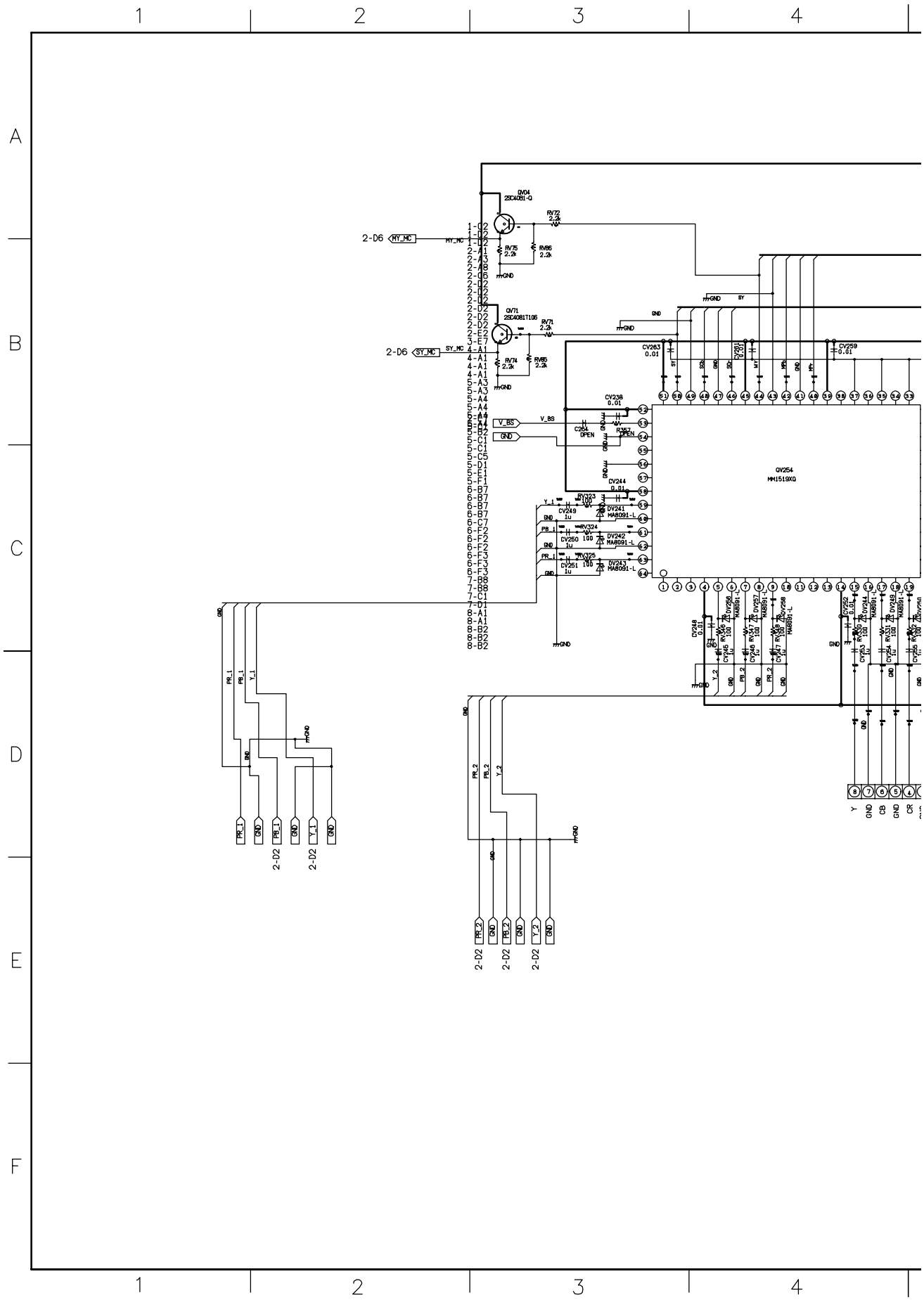

G.Hyper
TO CRT-D/R P00080-2
51H83/57H83/65H83
SIGNAL - Video
[SHEET-5/9]

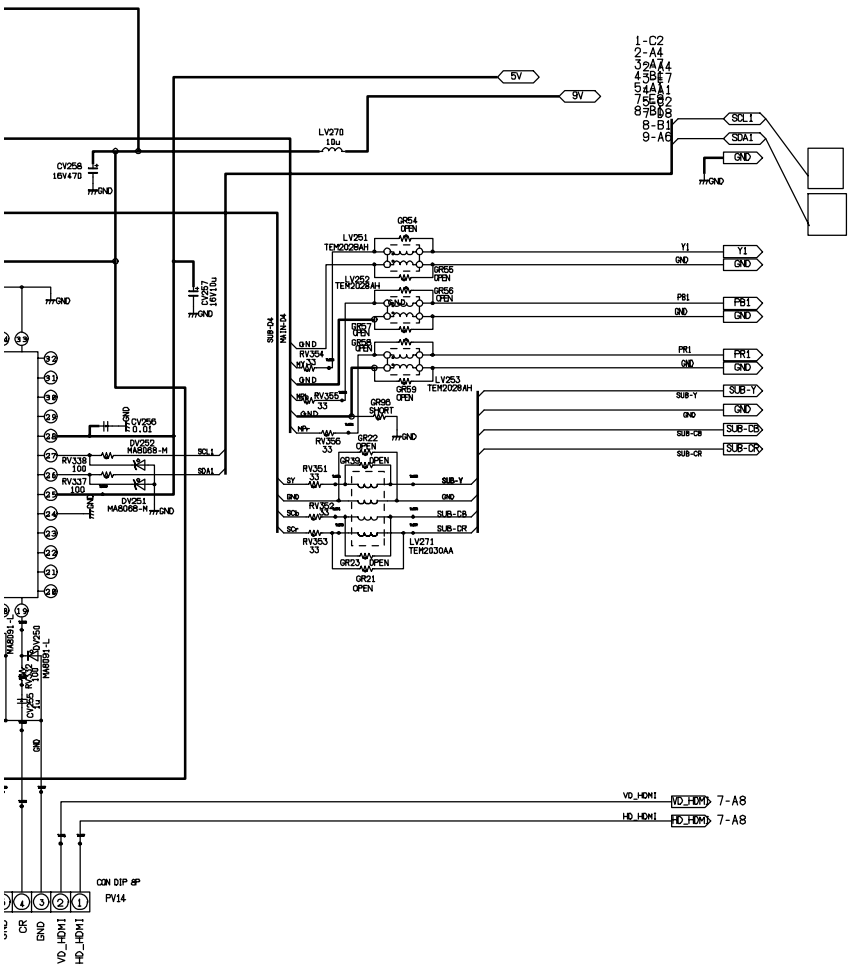

G.Hyper
P540
60P
0.9V(p-p) (H)
3.5V(p-p) (H)
BB 16P SOCKET
BB20
BB10
BB 16P SOCKET


UZ01
G-Hyper-MOD
9V_2
9-A1
0.78V(p-p) (H)
0.53V(p-p) (H)
0.75V(p-p) (H)
3.4V(p-p) (H)
3.6V(p-p) (H)
V_STOP_BLK
VP_D51
3-B3
OSD_R
3-D3
OSD_G
3-D3
OSD_B
3-D3
OSD-H
3-B3
YS_OSD
3-C3
SCL2
3-B3
SDA2
3-B3
YM
3-D3
TO CRT-D/R PD0080-2
R
GND
G
GND
B
GND
+9V
IK
Vref
GAMMA
GND
VM
GND
51H83/57H83/65H83
SIGNAL - Video
[SHEET-5/9]

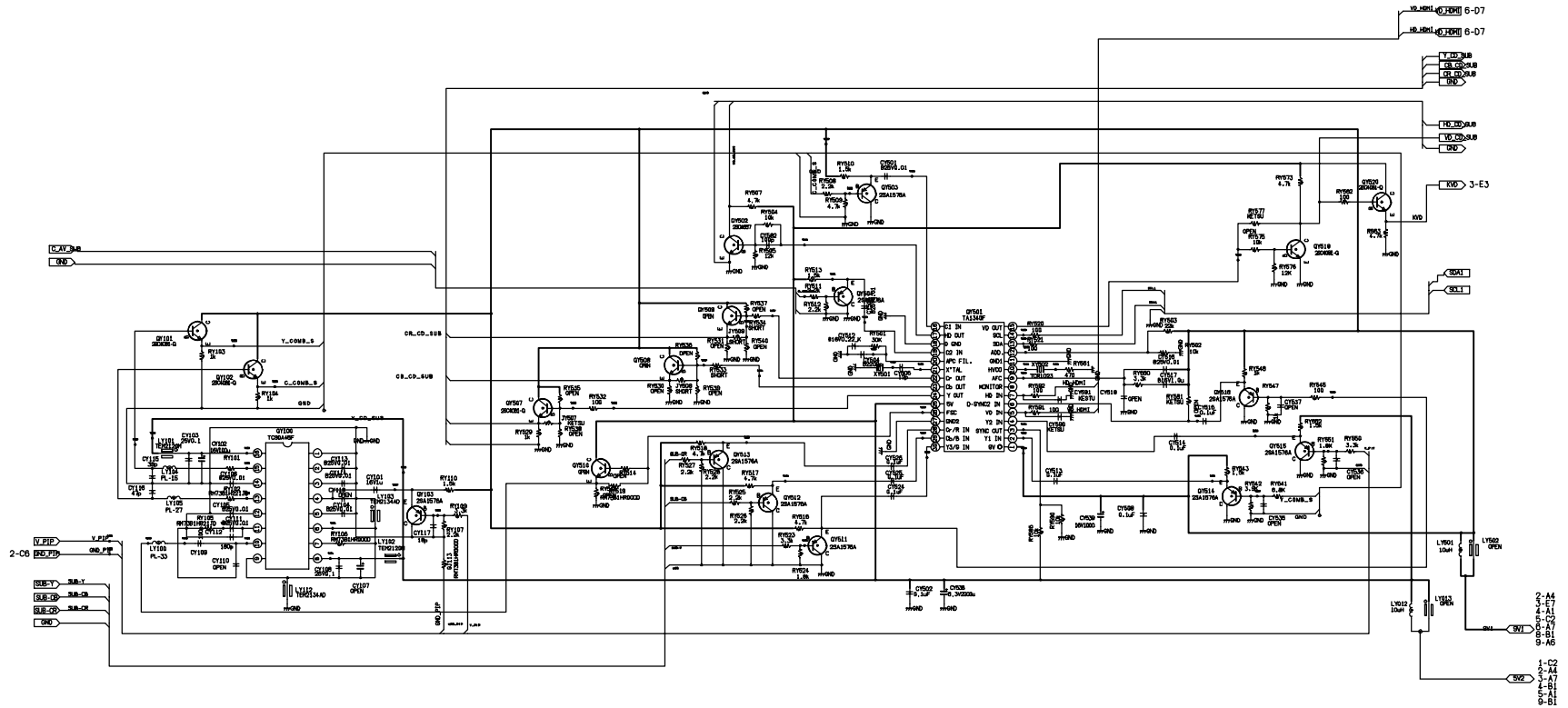


51H83/57H83/65H83
SIGNAL - AV-2
[SHEET-6/9]

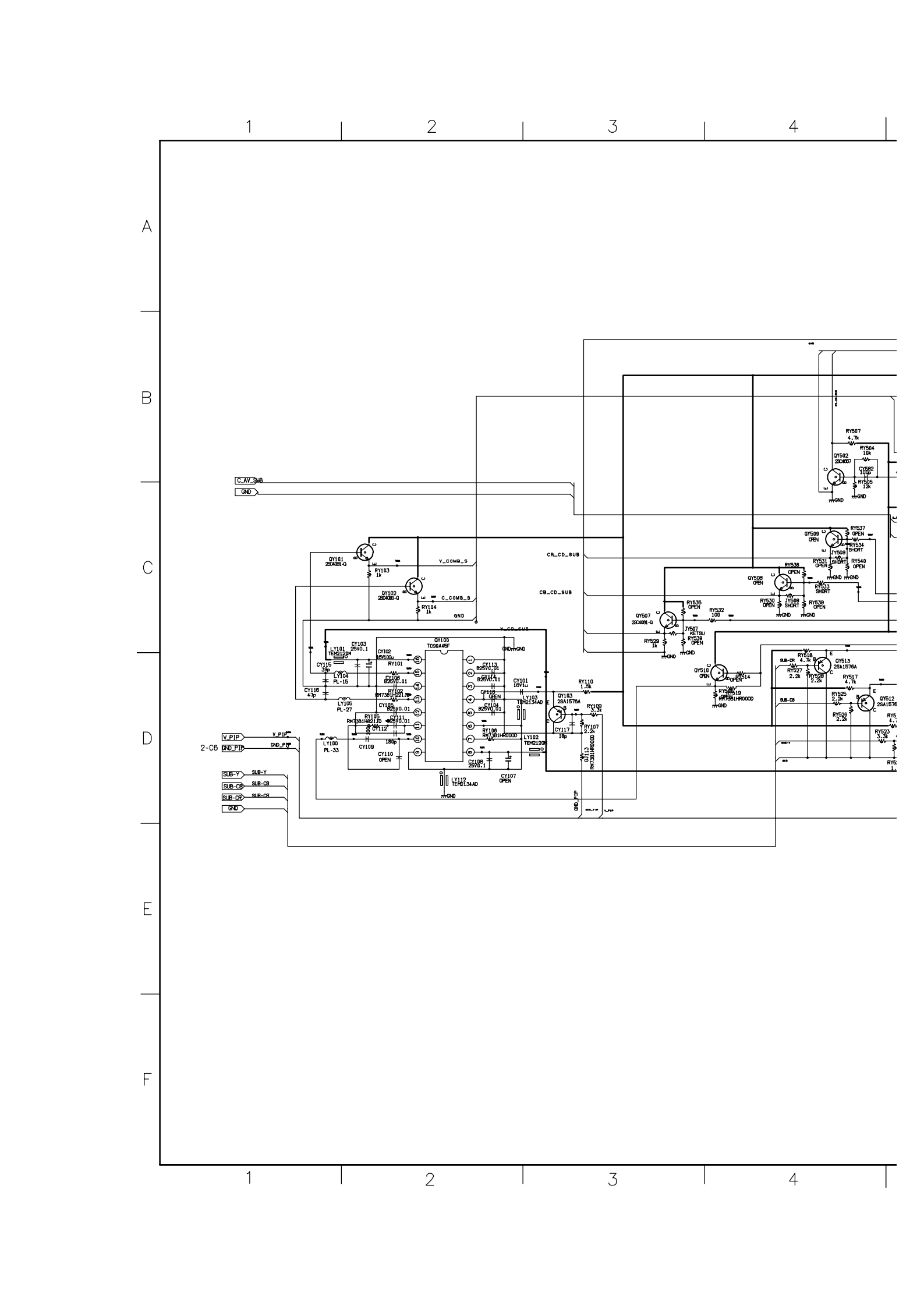

1
2
3
4
A
B
C
D
E
F
QV04
2SC4081-Q
RV72
2.2k
RV75
2.2k
RV86
2.2k
QV71
2SC4081T105
RV71
2.2k
RV74
2.2k
RV85
2.2k
2-D6
HY_MC
SY_MC
V_BS
GND
CV263
0.01
CV259
0.01
CV238
0.01
C264
OPEN
R387
OPEN
CV244
0.01
QV254
MM1519XQ
CV249
1u
CV250
1u
CV251
1u
RV323
100
RV324
100
RV325
100
DV241
MA8091-L
DV242
MA8091-L
DV243
MA8091-L
CV252
1u
CV253
1u
CV254
1u
CV255
1u
DV244
MA8091-L
DV245
MA8091-L
DV246
MA8091-L
DV247
MA8091-L
DV248
MA8091-L
CV245
1u
CV246
1u
CV247
1u
CV248
1u
RV330
100
RV331
100
RV332
100
RV333
100
PR_1
PB_1
Y_1
PR_2
PB_2
Y_2
2-D2
Y
CB
CR

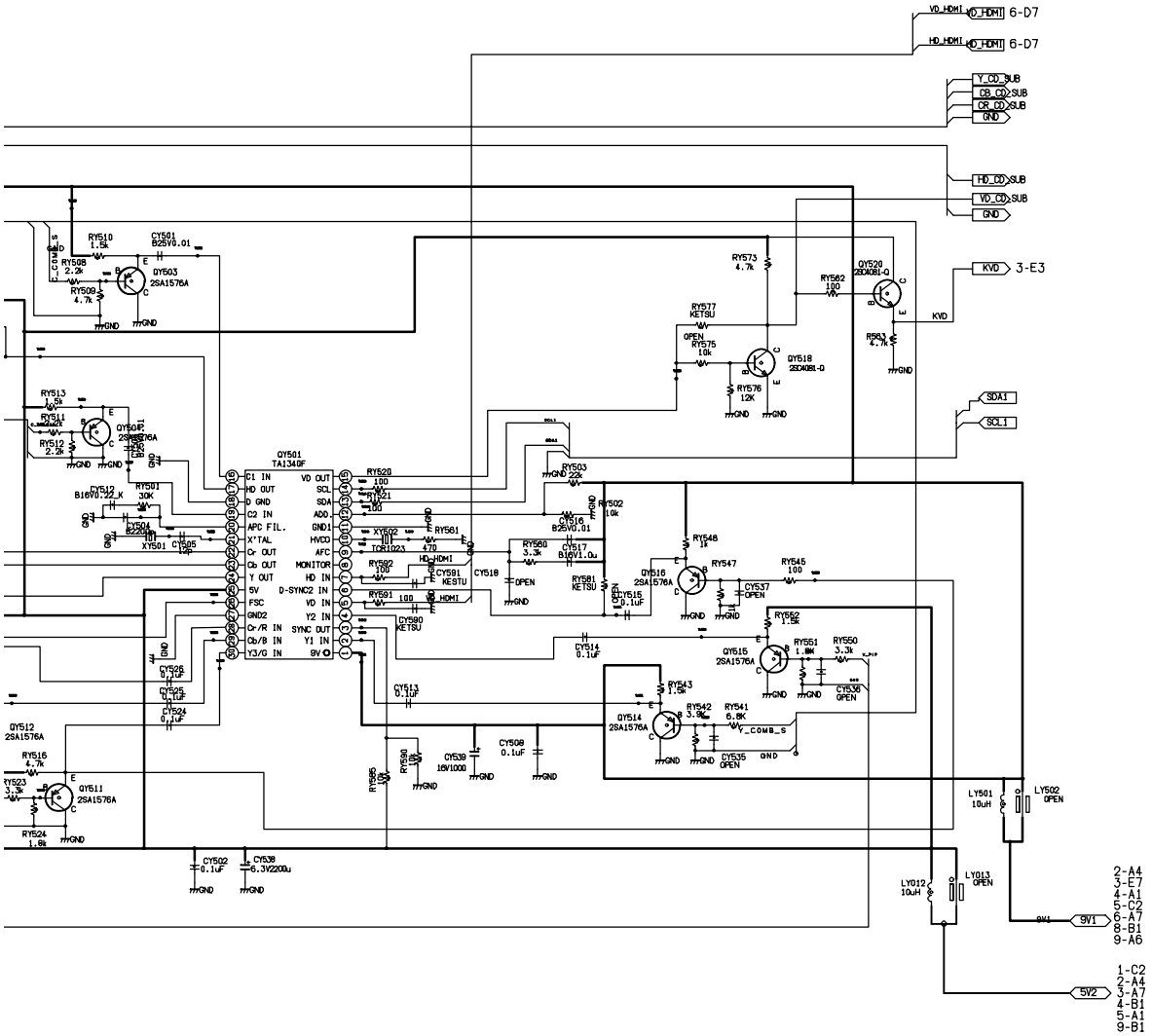


51H83/57H83/65H83
SIGNAL - AV-2
[SHEET-6/9]

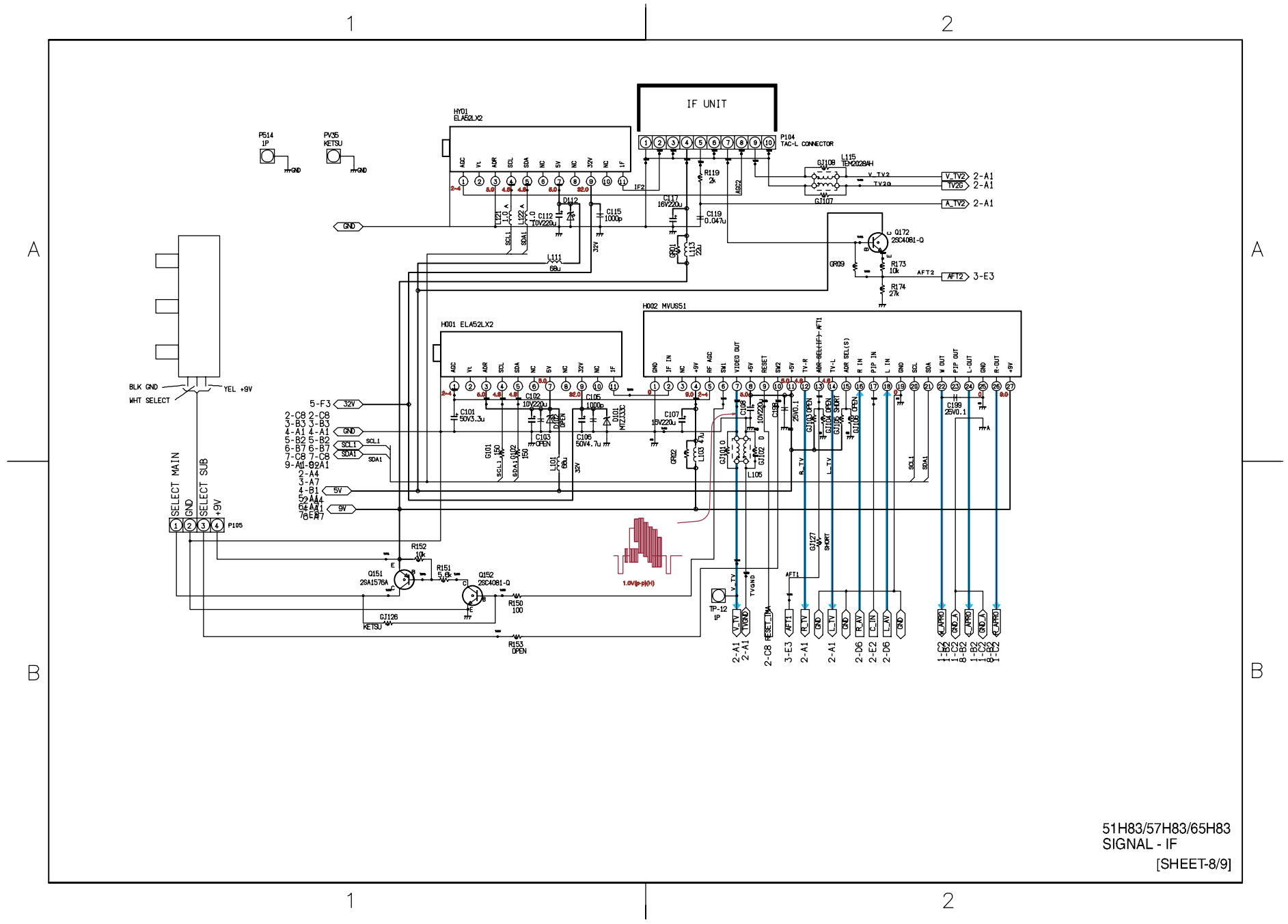


51H83/57H83/65H83
SIGNAL - AV-3
[SHEET-7/9]

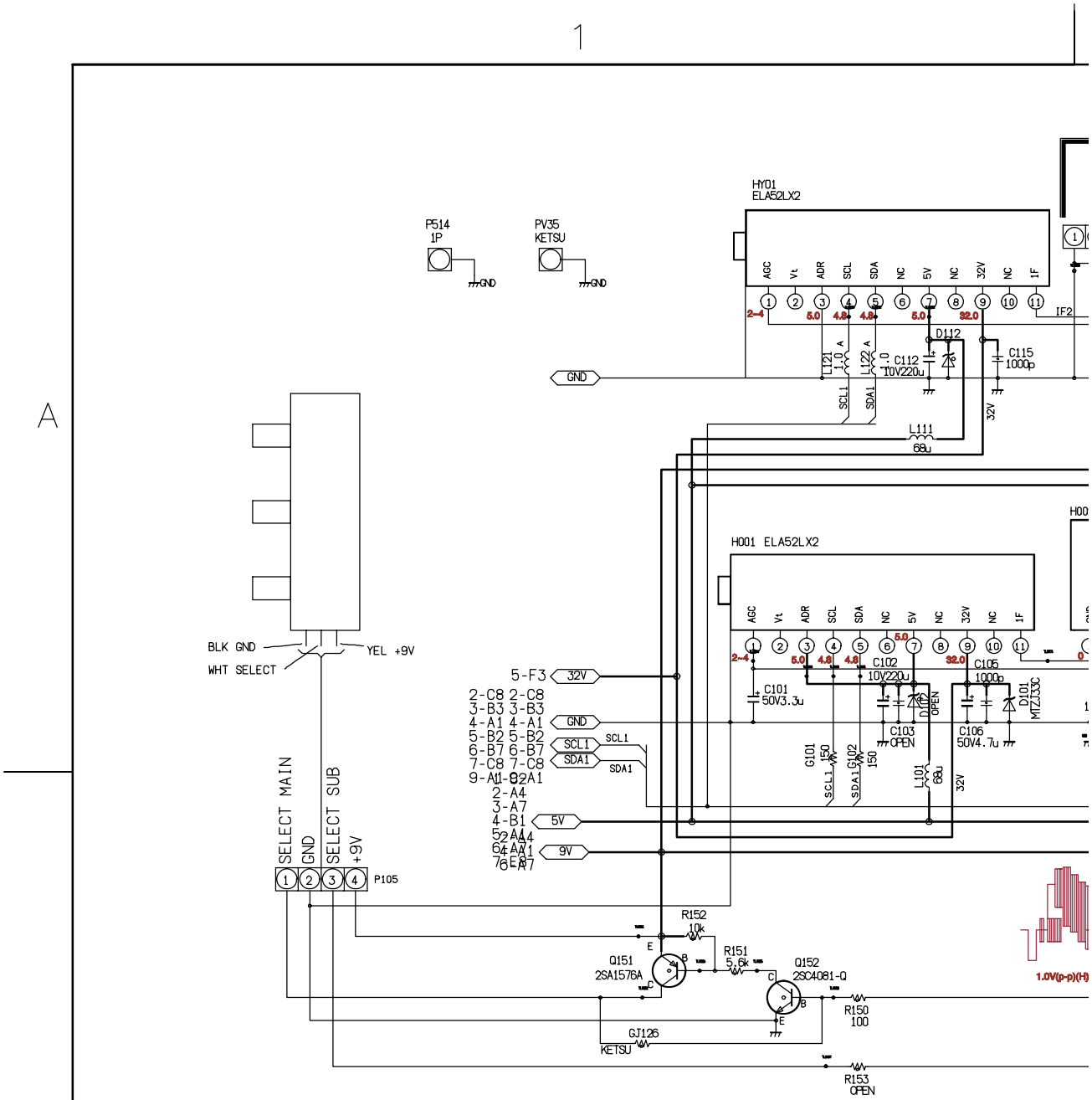

C_AV_SUB
GND
CR_CD_SUB
CB_CD_SUB
Y_COMB_S
C_COMB_S
QY101 2SD401-Q
QY102 2SD401-Q
QY100 TC90A45F
QY103 2SA1576A
QY507 2SC4081-Q
QY502 2SC4057
QY508 OPEN
QY509 OPEN
QY510 OPEN
QY513 2SA1576A
QY512 2SA1576A
RY507 4.7k
RY504 10k
RY505 12k
RY537 OPEN
RY534 SHORT
RY531 OPEN
RY540 OPEN
RY536 OPEN
RY533 SHORT
RY530 OPEN
RY539 OPEN
RY535 OPEN
RY532 100
RY529 1k
RY538 OPEN
RY103 1k
RY104 1k
RY110 1.5k
RY108 3.3k
RY107 2.2k
RY518 4.7k
RY527 2.2k
RY528 2.2k
RY517 4.7k
RY525 2.2k
RY526 2.2k
RY523 3.3k
LY101 TEM2120M
LY102 TEM2120M
LY103 TEM2134AD
LY104 PL-15
LY105 PL-27
LY100 PL-33
LY112 TEM2134AD
CY103 25V0.1
CY102 16V100u
CY115 39p
CY116 47p
CY101 16V1u
CY117 18p
CY109 180p
CY110 OPEN
CY107 OPEN
CY108 25V0.1
V_PIP
GND_PIP
2-C6
SUB-Y
SUB-CB
SUB-CR
GND

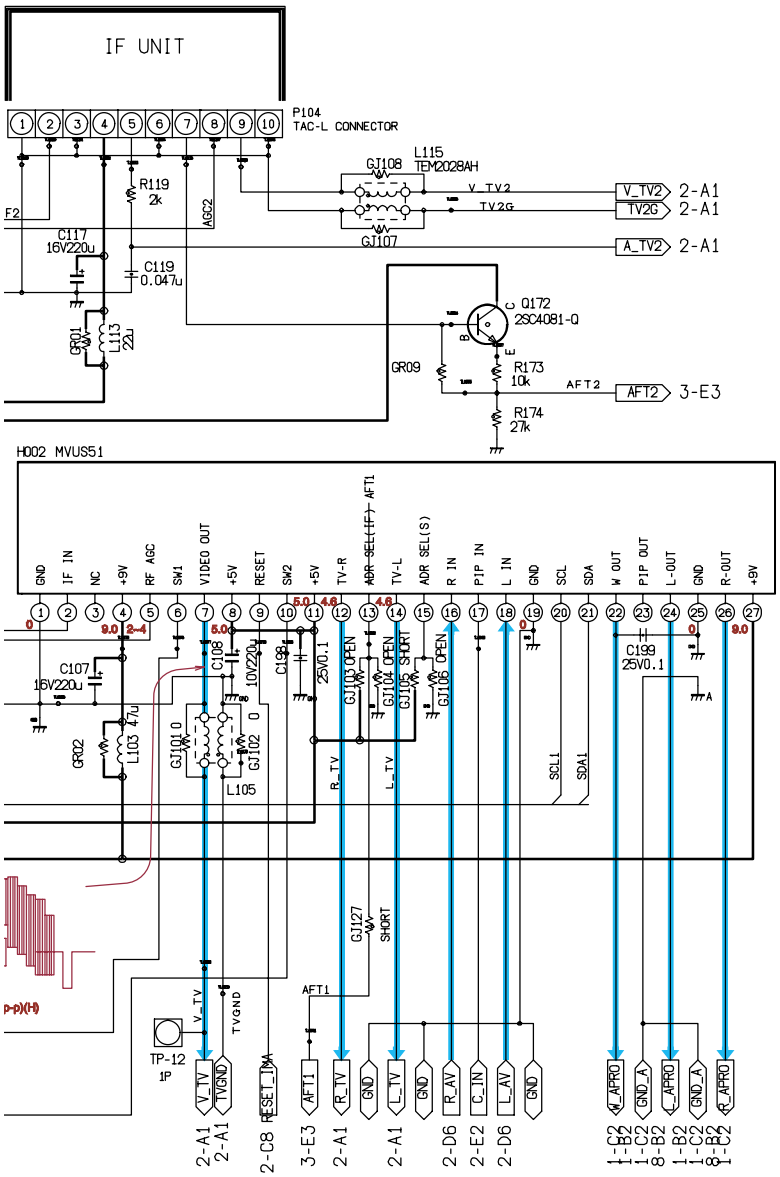


51H83/57H83/65H83
SIGNAL - AV-3
[SHEET-7/9]

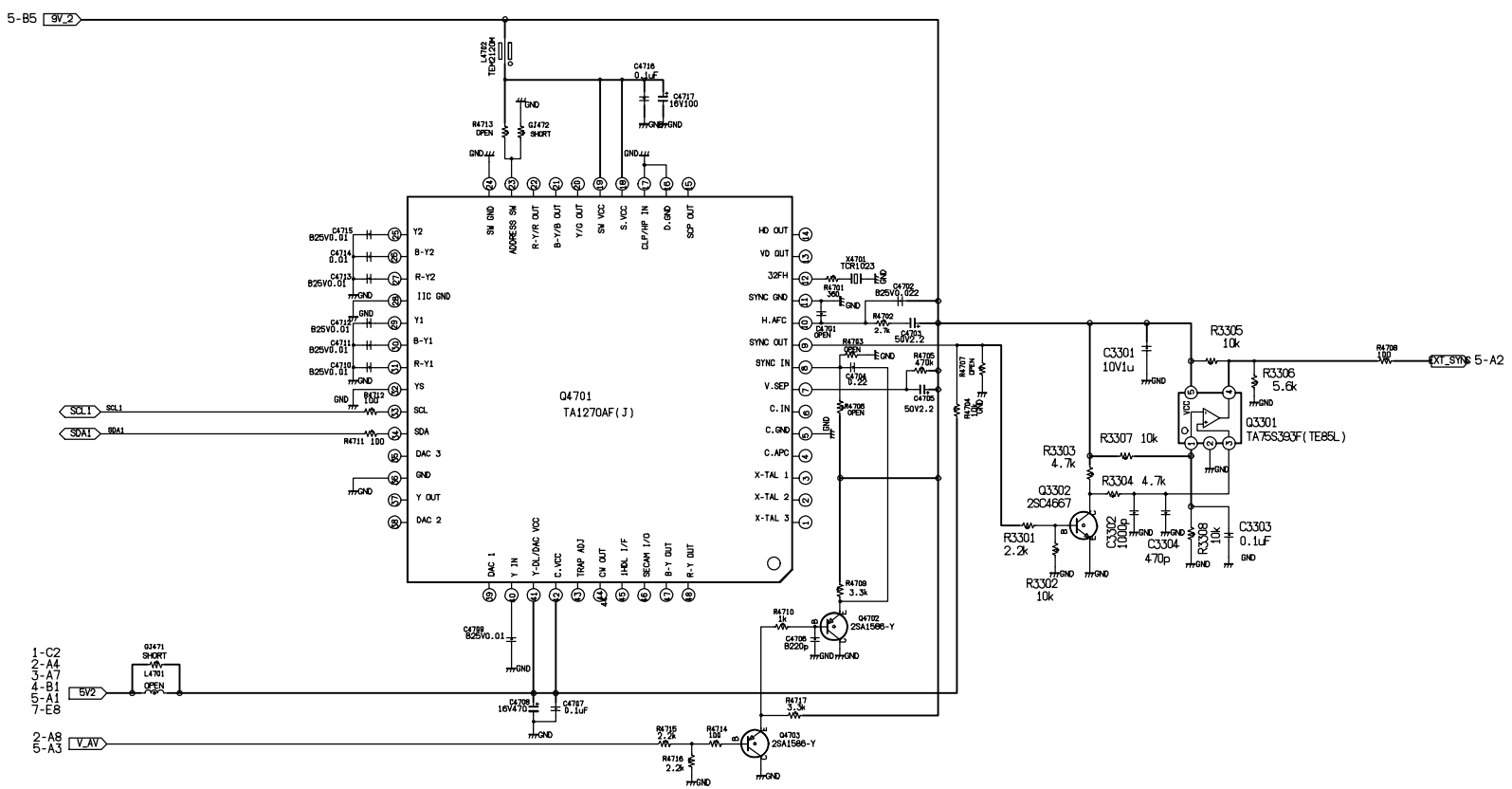


51H83/57H83/65H83
SIGNAL - IF
[SHEET-8/9]

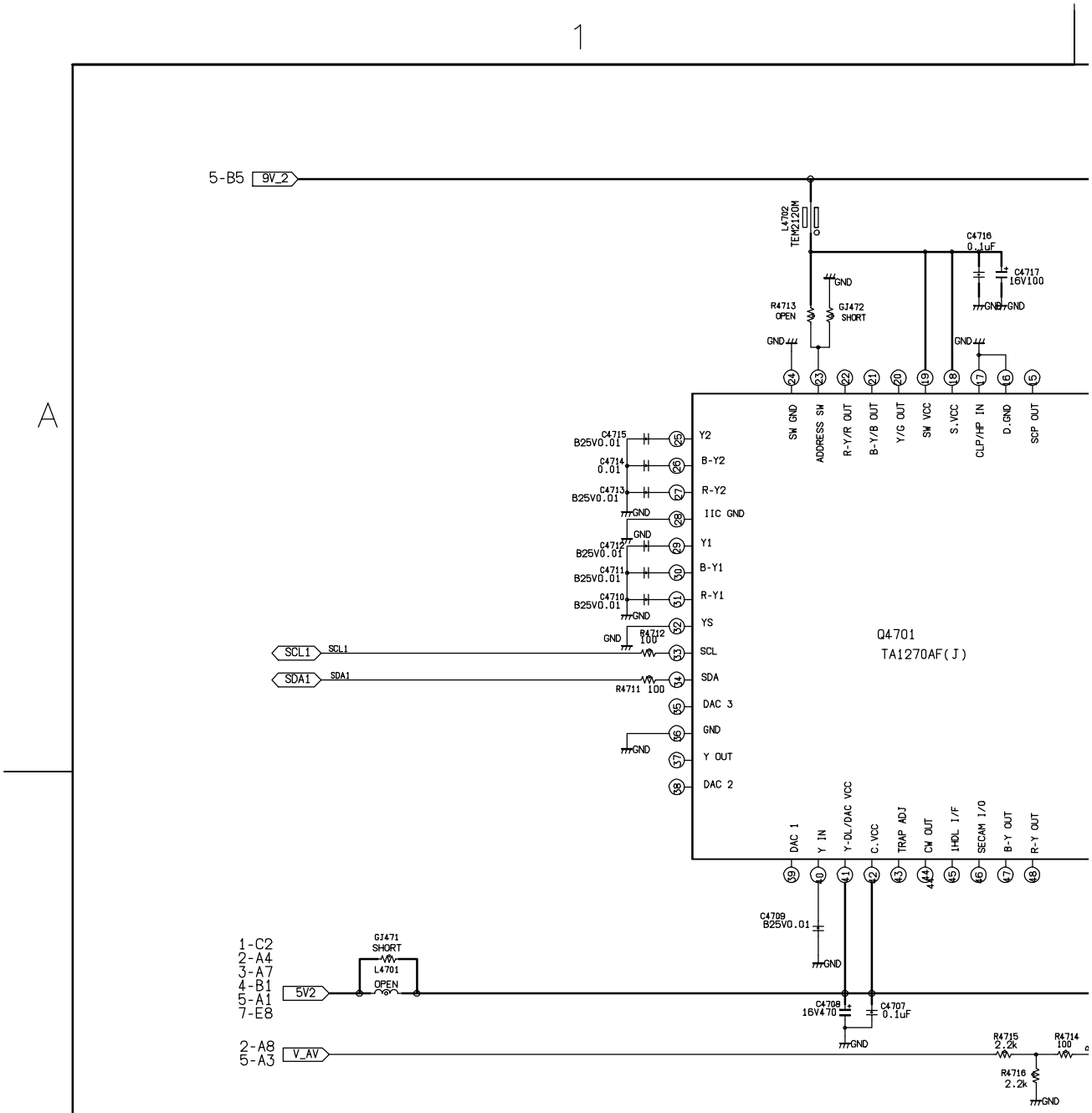

HY01
ELA52LX2
AGC
Vt
ADR
SCL
SDA
NC
5V
NC
32V
NC
1F
P514
1P
PV35
KETSU
GND
IF2
D112
C115
1000p
C112
10V220u
L121
1.0 A
L122
1.0 A
SCL1
SDA1
32V
L111
68u
H001 ELA52LX2
C101
50V3.3u
C102
10V220u
C103
OPEN
C105
1000p
C106
50V4.7u
D101
MTZJ33C
G101
150
G102
150
L101
68u
BLK GND
WHT SELECT
YEL +9V
5-F3
2-C8
3-B3
4-A1
5-B2
6-B7
7-C8
9-A1
2-A4
3-A7
4-B1
5-A4
6-A1
7-E8
5V
9V
SELECT MAIN
GND
SELECT SUB
+9V
P105
R152
10k
Q151
2SA1576A
R151
5.6k
Q152
2SC4081-Q
R150
100
GJ126
KETSU
R153
OPEN
1.0V(p-p)(H)

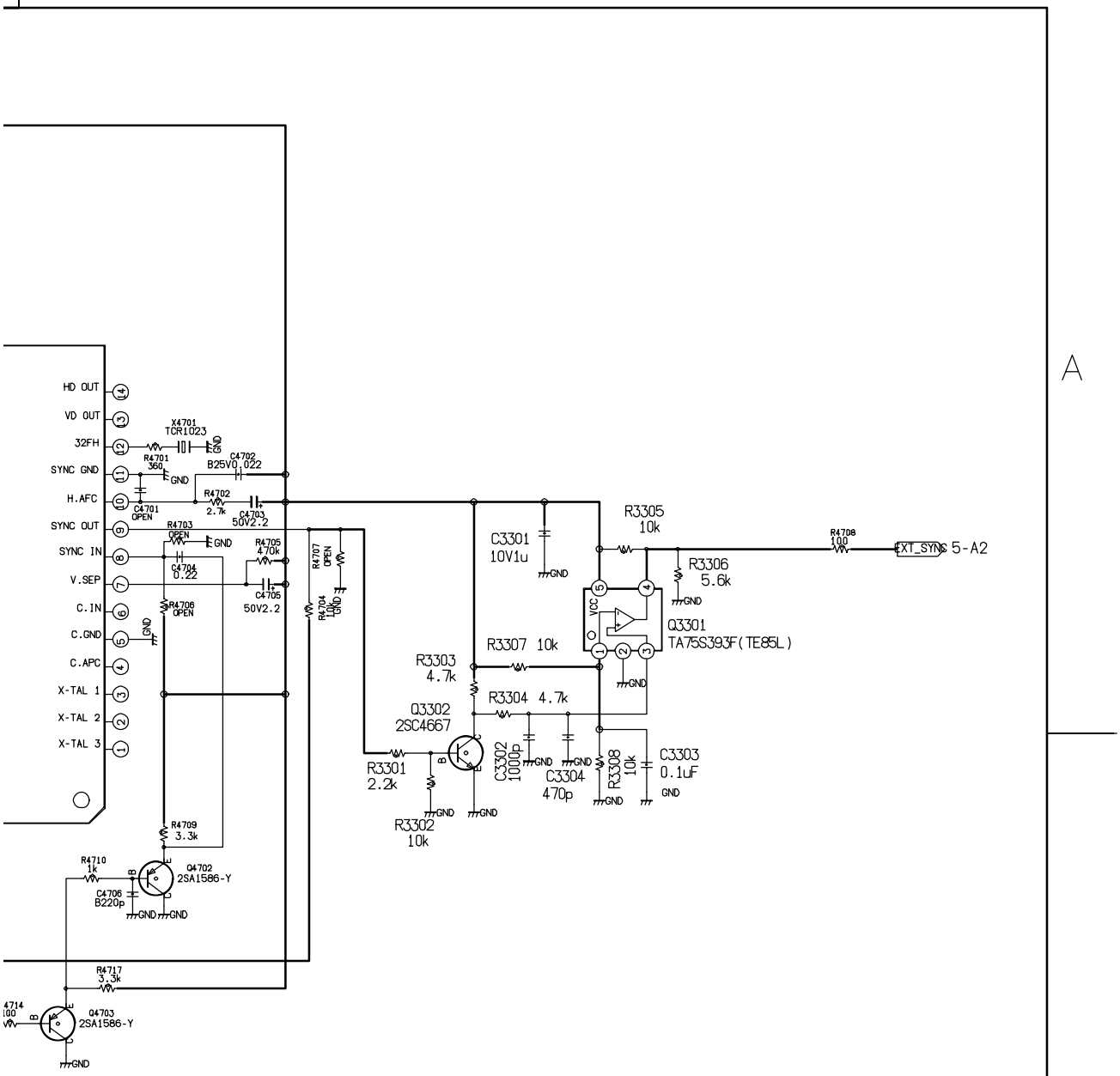


51H83/57H83/65H83
SIGNAL - IF
[SHEET-8/9]

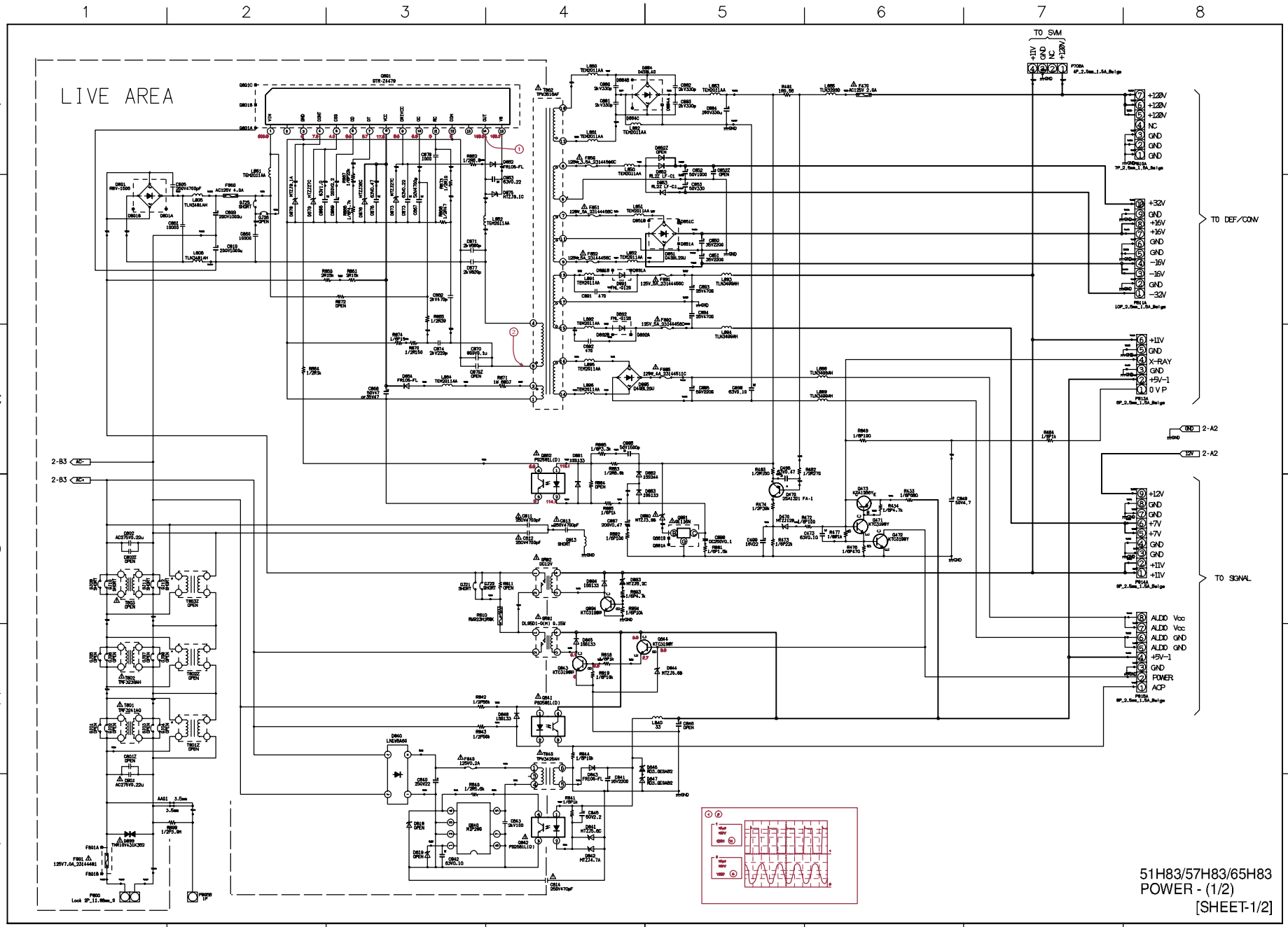


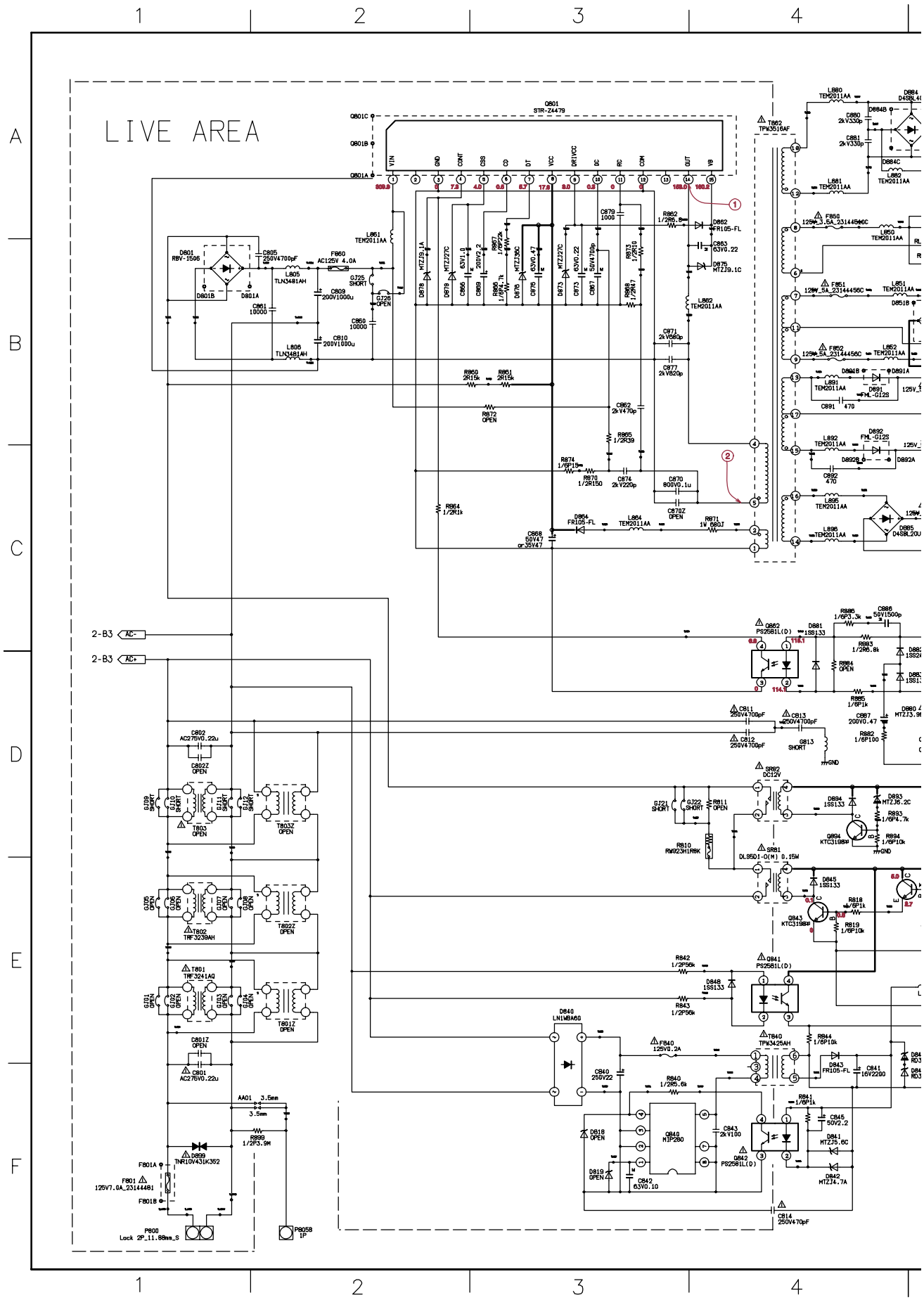
51H83/57H83/65H83
SIGNAL - SYNC OUT
[SHEET-9/9]

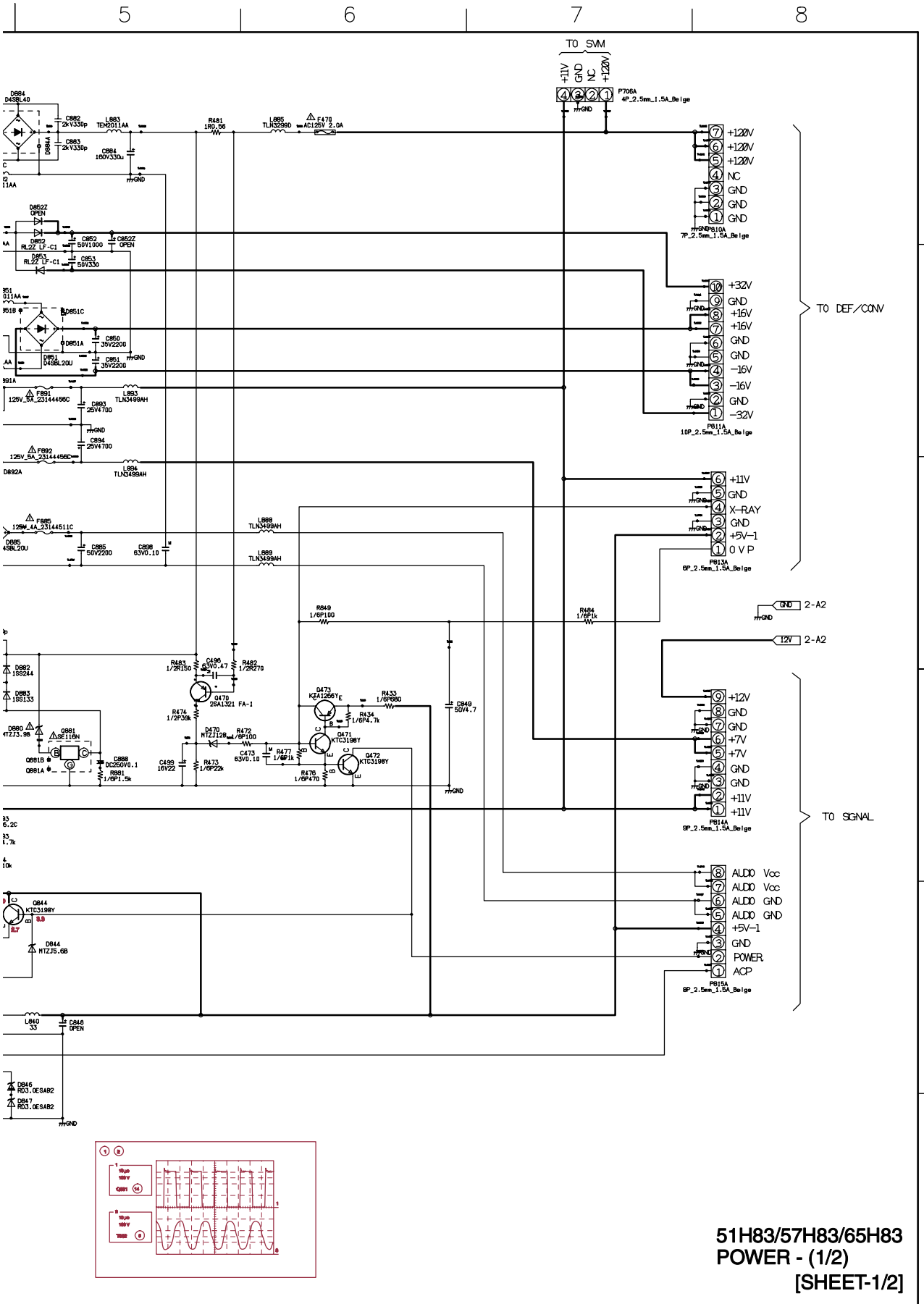

5-B5
9V_2
L4702
TEM2120M
C4716
0.1uF
C4717
16V100
GND
R4713
OPEN
GJ472
SHORT
SW GND
ADDRESS SW
R-Y/R OUT
B-Y/B OUT
Y/G OUT
SW VCC
S.VCC
CLP/HP IN
D.GND
SCP OUT
C4715
B25V0.01
C4714
0.01
C4713
B25V0.01
C4712
B25V0.01
C4711
B25V0.01
C4710
B25V0.01
R4712
100
R4711
100
Y2
B-Y2
R-Y2
IIC GND
Y1
B-Y1
R-Y1
YS
SCL
SDA
DAC 3
GND
Y OUT
DAC 2
SCL1
SDA1
Q4701
TA1270AF(J)
DAC 1
Y IN
Y-DL/DAC VCC
C.VCC
TRAP ADJ
CW OUT
1HDL I/F
SECAM I/O
B-Y OUT
R-Y OUT
C4709
B25V0.01
1-C2
2-A4
3-A7
4-B1
5-A1
7-E8
GJ471
SHORT
L4701
OPEN
5V2
C4708
16V470
C4707
0.1uF
2-A8
5-A3
V_AV
R4715
2.2k
R4714
100
R4716
2.2k



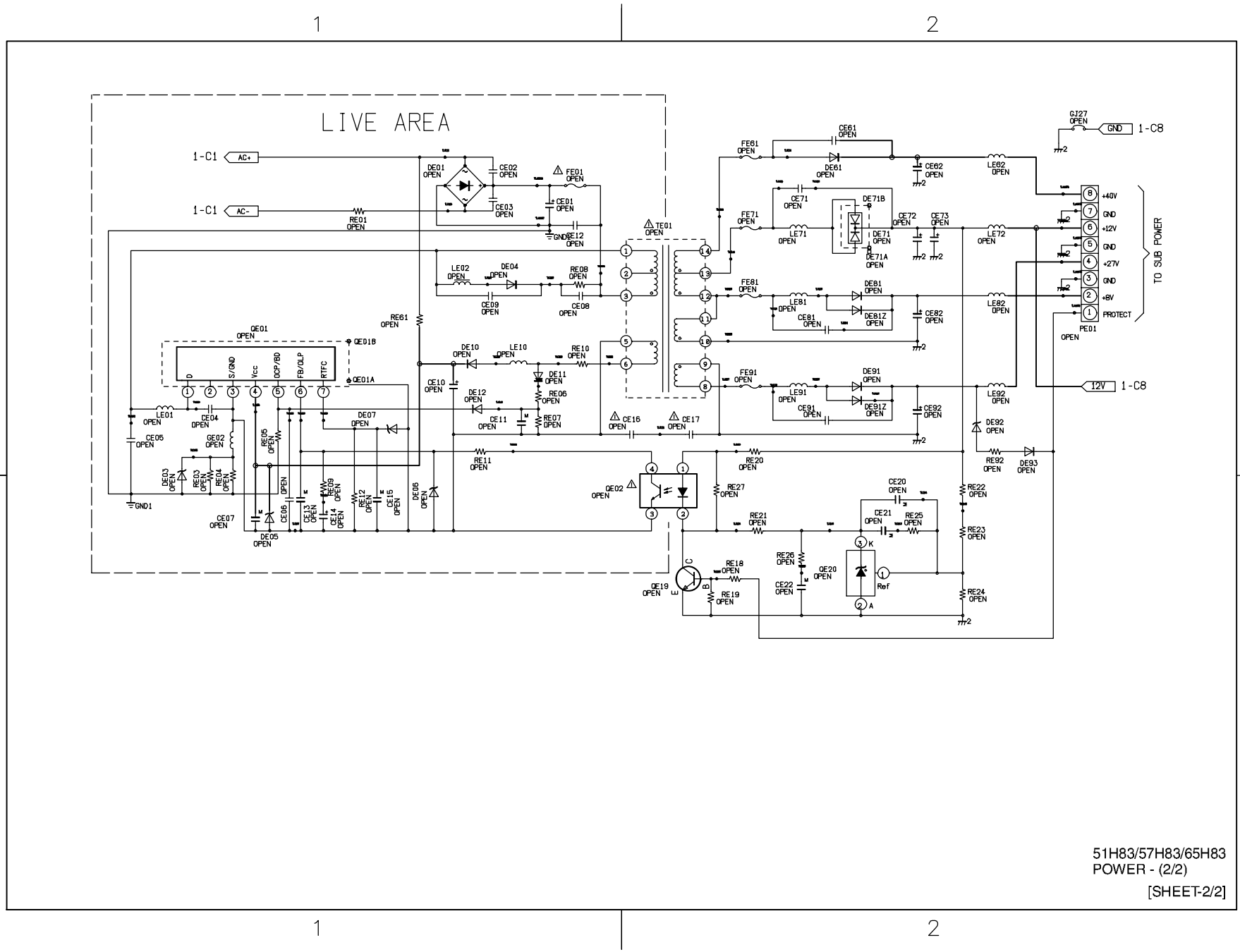
51H83/57H83/65H83
SIGNAL - SYNC OUT
[SHEET-9/9]


LIVE AREA
TO SVM
+11V
GND
NC
+120V
TO DEF/CONV
TO SIGNAL
51H83/57H83/65H83
POWER - (1/2)
[SHEET-1/2]

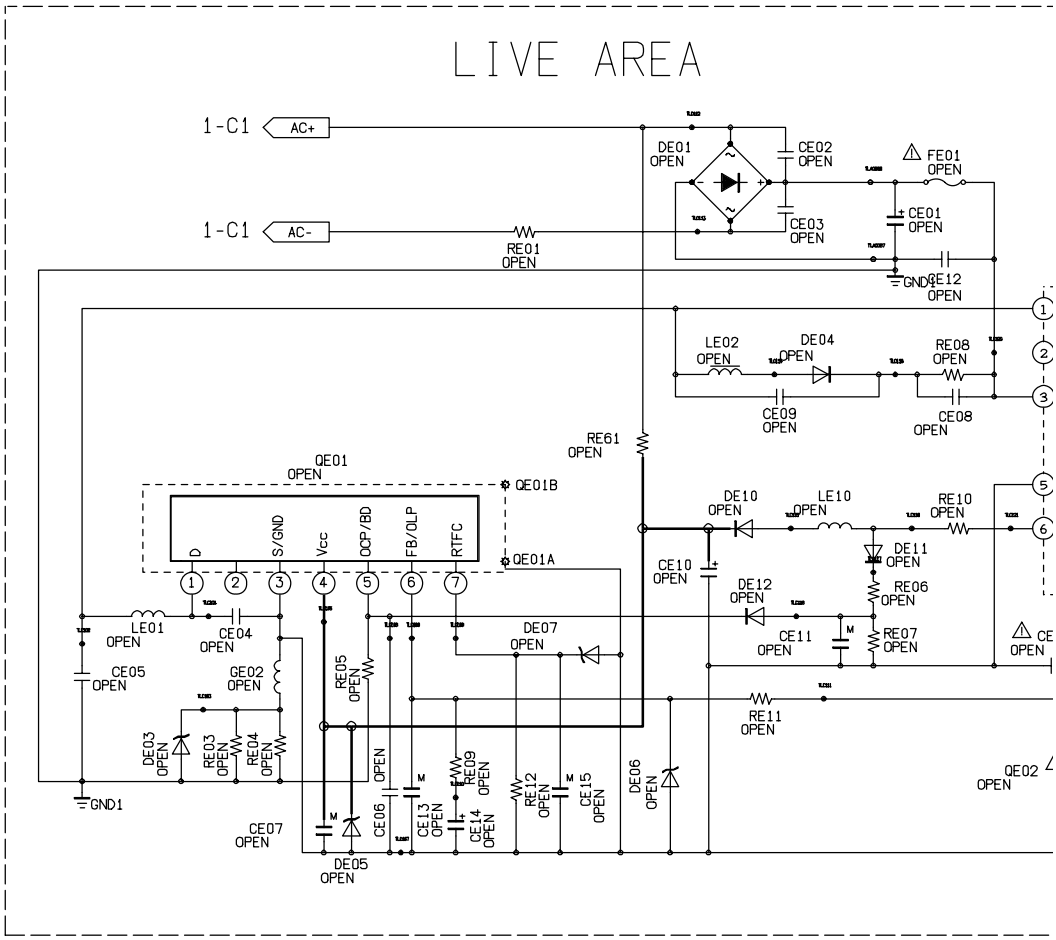

LIVE AREA
Q801
STR-Z4479
VIN
GND
CONT
CSS
CD
DT
VCC
DRVCC
DC
RC
COM
OUT
VB
T862
TPW3516AF
D862
FR105-FL
D875
MTZJ9.1C
C863
63V0.22
C879
1000
R862
1/2R6.8
C871
2kV680p
C877
2kV820p
C862
2kV470p
R865
1/2R39
R872
OPEN
R860
2R15k
R861
2R15k
R874
1/6P15
R870
1/2R150
C874
2kV220p
C870
800V0.1u
C870Z
OPEN
R864
1/2R1k
D864
FR105-FL
L864
TEM2011AA
R871
1W 680J
C868
50V47
or35V47
D801
RBV-1506
C805
250V470pF
L805
TLN3481AH
F860
AC125V 4.0A
GJ25
SHORT
C809
200V1000u
C861
10000
C860
10000
C810
200V1000u
L806
TLN3481AH
GJ26
OPEN
L861
TEM2011AA
L862
TEM2011AA
L863
TEM2011AA
L864
TEM2011AA
L865
TEM2011AA
L866
TEM2011AA
L880
TEM2011AA
L881
TEM2011AA
L882
TEM2011AA
L850
TEM2011AA
L851
TEM2011AA
L852
TEM2011AA
L891
TEM2011AA
L892
TEM2011AA
L895
TEM2011AA
L896
TEM2011AA
D884
D4SBL40
D884B
D884C
C880
2kV330p
C881
2kV330p
F850
125W 3.5A_231445400C
F851
125W 5A_231445600C
F852
125W 5A_231445600C
D851B
D852B
D891A
D891B
D891
FML-G12S
C891
470
D892
FML-G12S
D892A
D892B
C892
470
D885
D4SBL20U
2-B3
AC-
2-B3
AC+
Q862
PS2581L(D)
D881
1SS133
R883
1/2R6.8k
R884
OPEN
R885
1/6P1k
R886
1/6P3.3k
C886
50V1500p
C887
200V0.47
R882
1/6P100
C811
250V4700pF
C813
250V4700pF
C812
250V4700pF
GJ13
SHORT
mGND
D802
AC275V0.22u
C802Z
OPEN
T803
GJ09
SHORT
GJ10
SHORT
GJ11
SHORT
GJ12
SHORT
T803Z
OPEN
T802
TNF3239AH
GJ05
OPEN
GJ06
OPEN
GJ07
OPEN
GJ08
OPEN
T802Z
OPEN
T801
TNF3241AQ
GJ01
OPEN
GJ02
OPEN
GJ03
OPEN
GJ04
OPEN
T801Z
OPEN
C801Z
OPEN
C801
AC275V0.22u
AA01
3.5mm
3.5mm
R899
1/2F3.9M
D899
TNR10V431K352
F801A
F801
125V7.0A_231444B1
F801B
P800
Lock 2P_11.86mm_S
P8058
1P
SR92
DC12V
GJ21
SHORT
GJ22
SHORT
R811
OPEN
R810
RW923H1R8K
D894
1SS133
D893
MTZJ6.2C
R893
1/6P4.7k
Q894
KTC3198W
R894
1/6P10k
mGND
SR81
DL9501-0(M) 0.15W
D845
1SS133
R818
1/6P1k
Q843
KTC3198W
R819
1/6P10k
R842
1/2P56k
Q841
PS2581L(D)
D848
1SS133
R843
1/2P56k
D840
LN1WBA60
T840
TPW3425AH
F840
125V0.2A
C840
250V22
R840
1/2R5.6k
R844
1/6P10k
D843
FR105-FL
C841
16V2200
R841
1/6P1k
C845
50V2.2
D841
MTZJ5.6C
D842
MTZJ4.7A
Q840
MIP280
C843
2kV100
Q842
PS2581LL(D)
D818
OPEN
D819
OPEN
C842
63V0.10
C814
250V470pF



51H83/57H83/65H83
POWER - (1/2)
[SHEET-1/2]



51H83/57H83/65H83
POWER - (2/2)
[SHEET-2/2]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1-C1
AC-
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CE02
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FE01
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RE01
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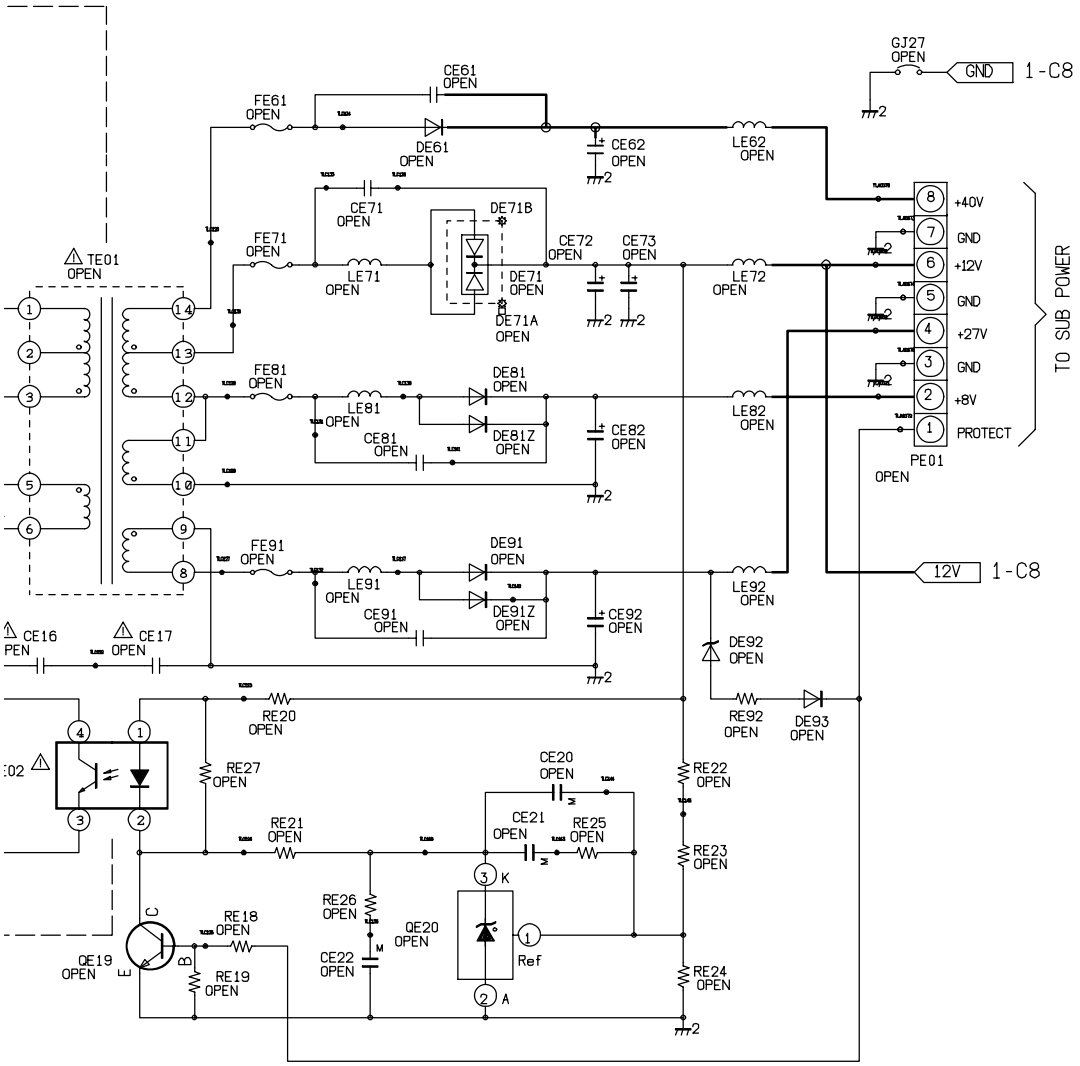
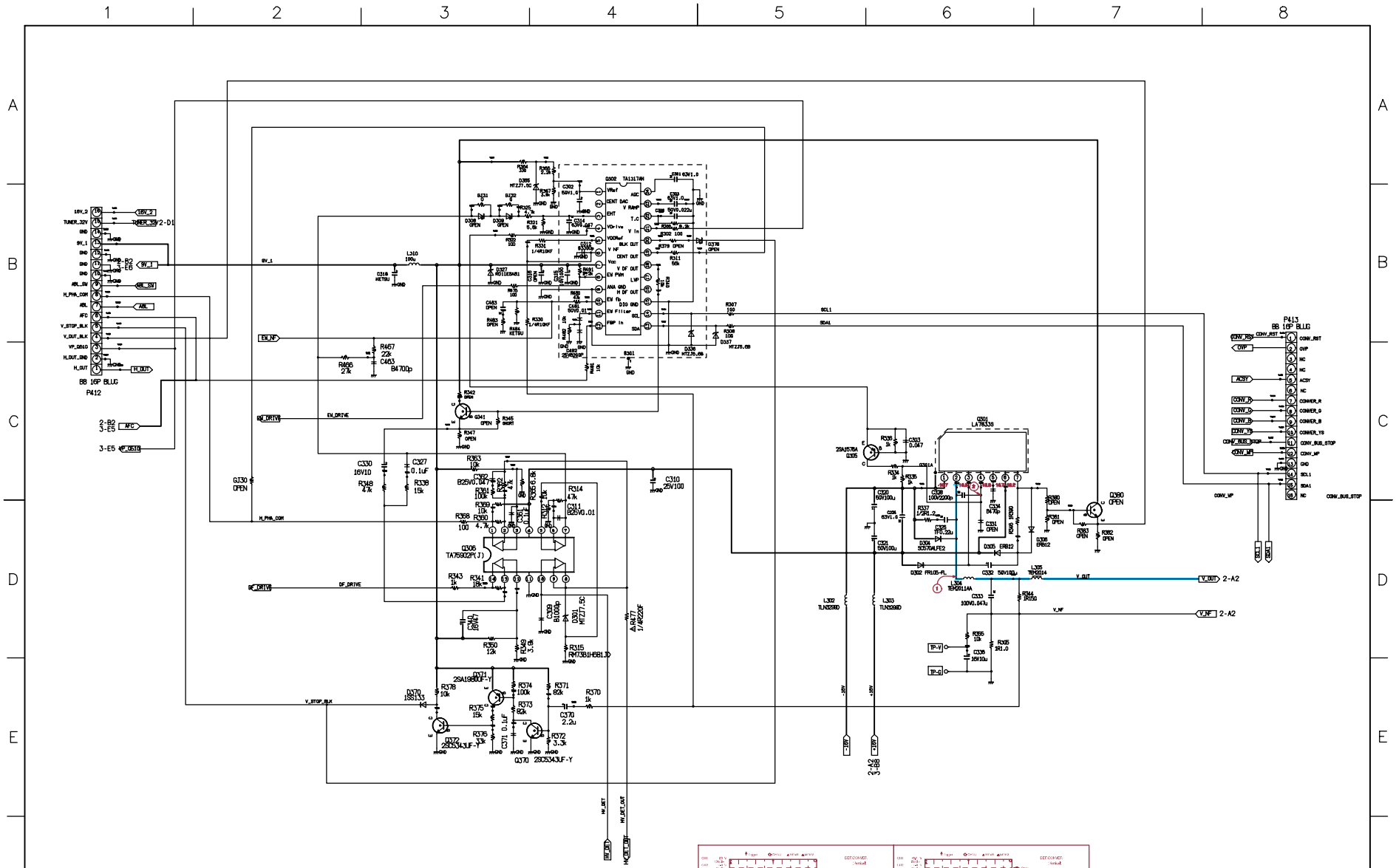
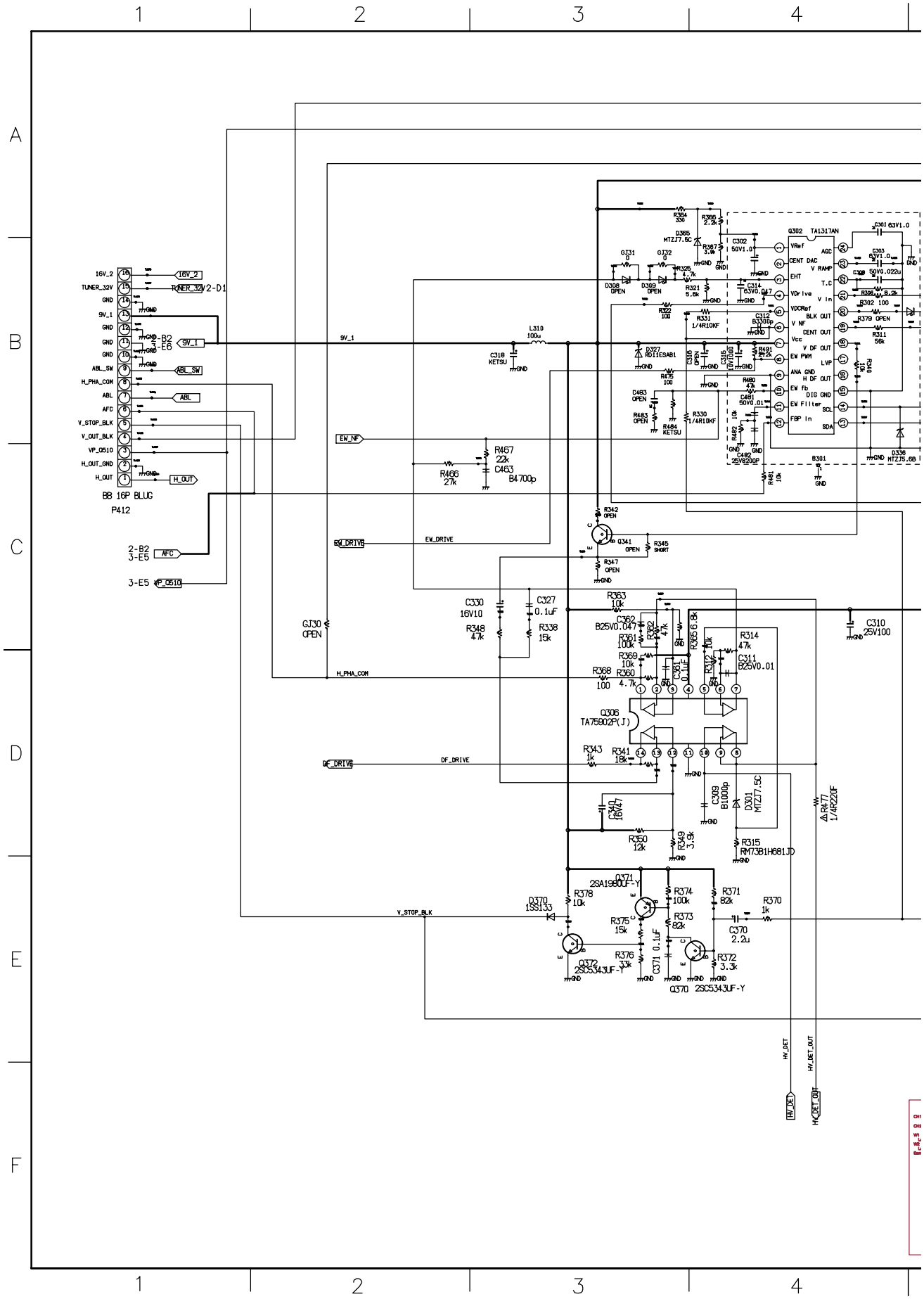


51H83/57H83/65H83
POWER - (2/2)

[SHEET-2/2]



51H83/57H83/65H83
DEF/CONVER - Vertical
[SHEET-1/3]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A
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TUNER_32V
9V_1
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ABL
AFC
V_STOP_BLK
V_OUT_BLK
VP_Q510
H_OUT_GND
H_OUT
BB 16P BLUE
P412
2-B2
3-E6
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9V_1
EW_NF
EW_DRIVE
DF_DRIVE
H_PHA_COM
V_STOP_BLK
HV_DET
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Q302 TA1317AN
VRef
CENT DAC
EHT
VDrive
VDCRef
Vcc
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AGC
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C315
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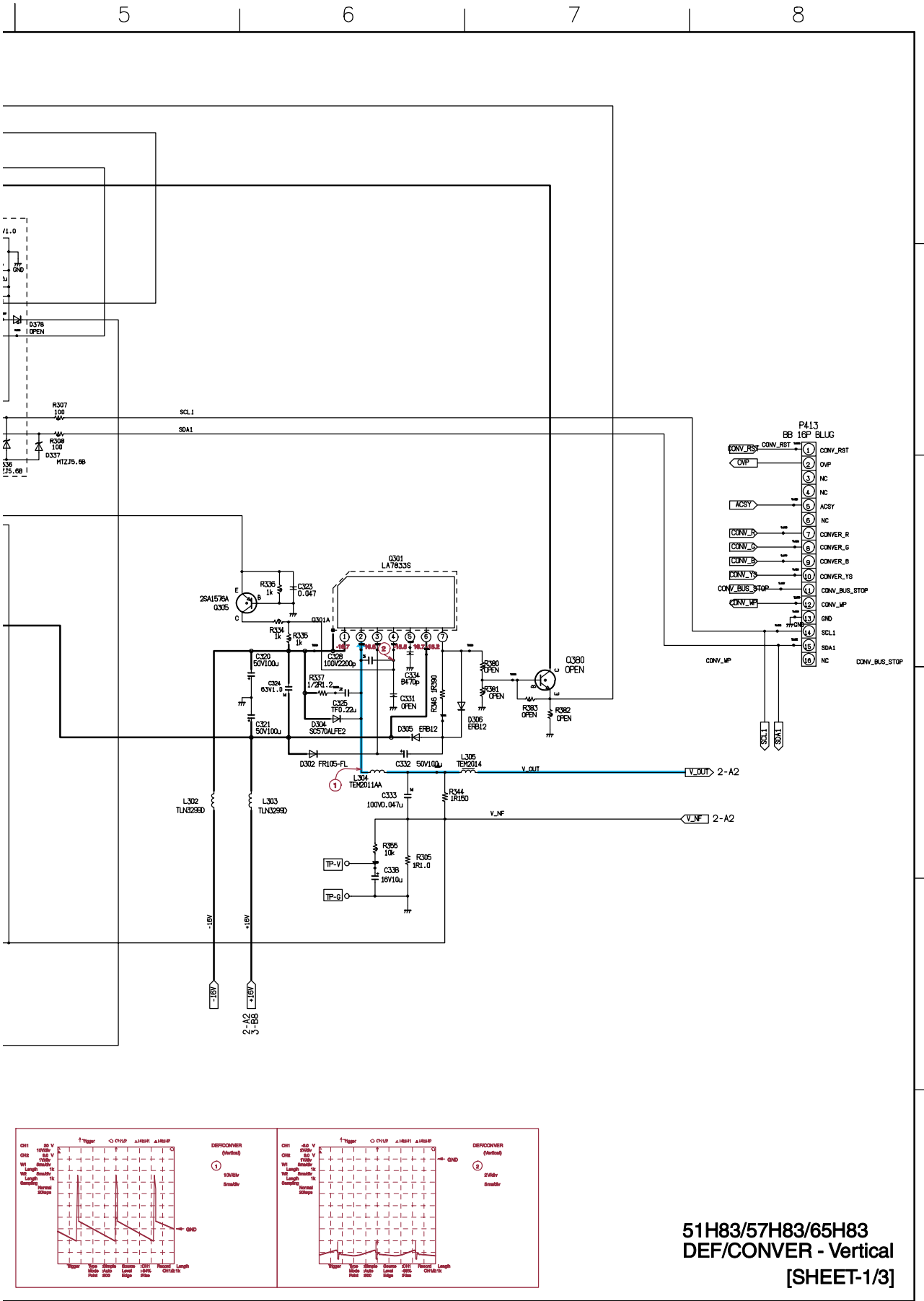
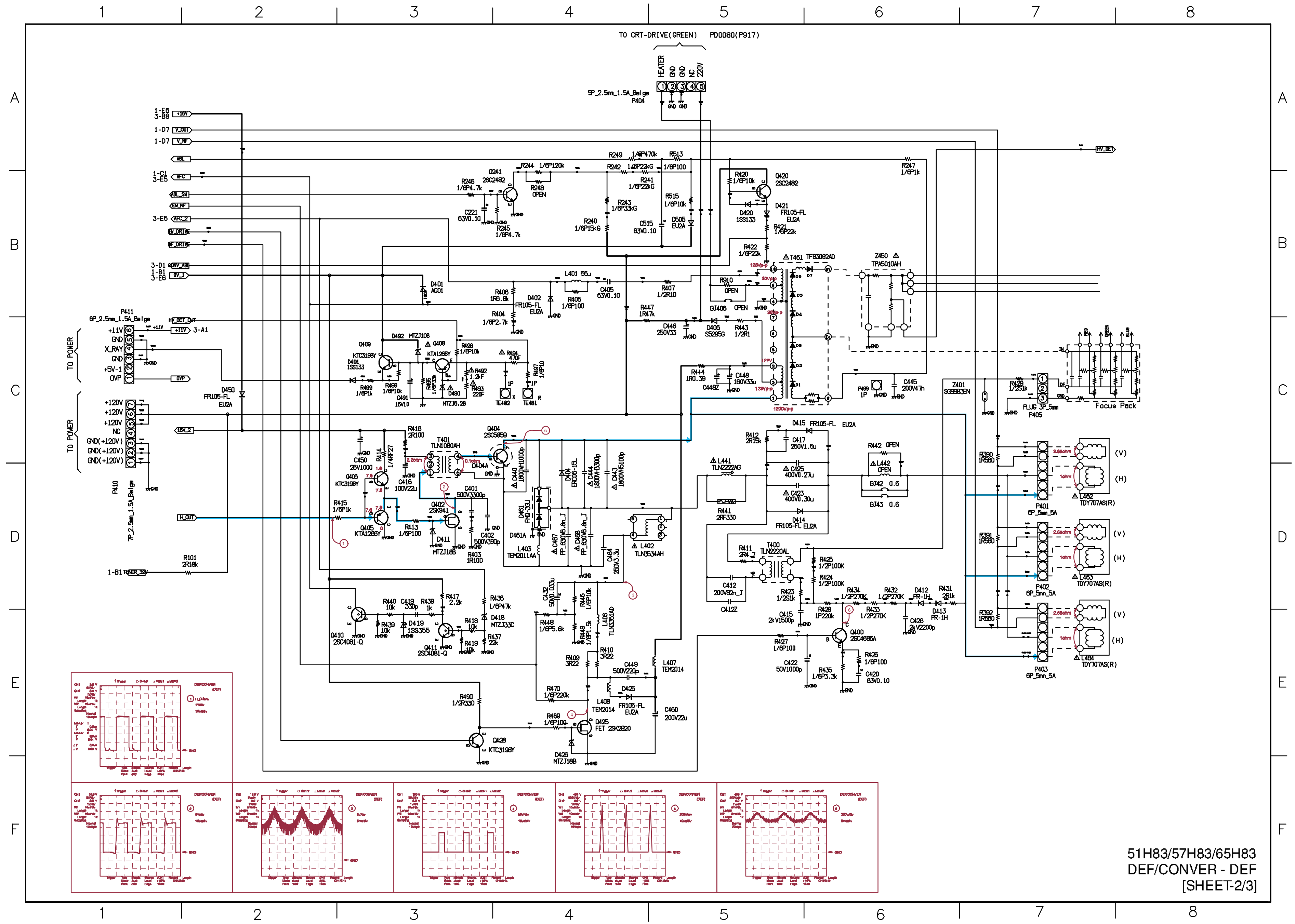
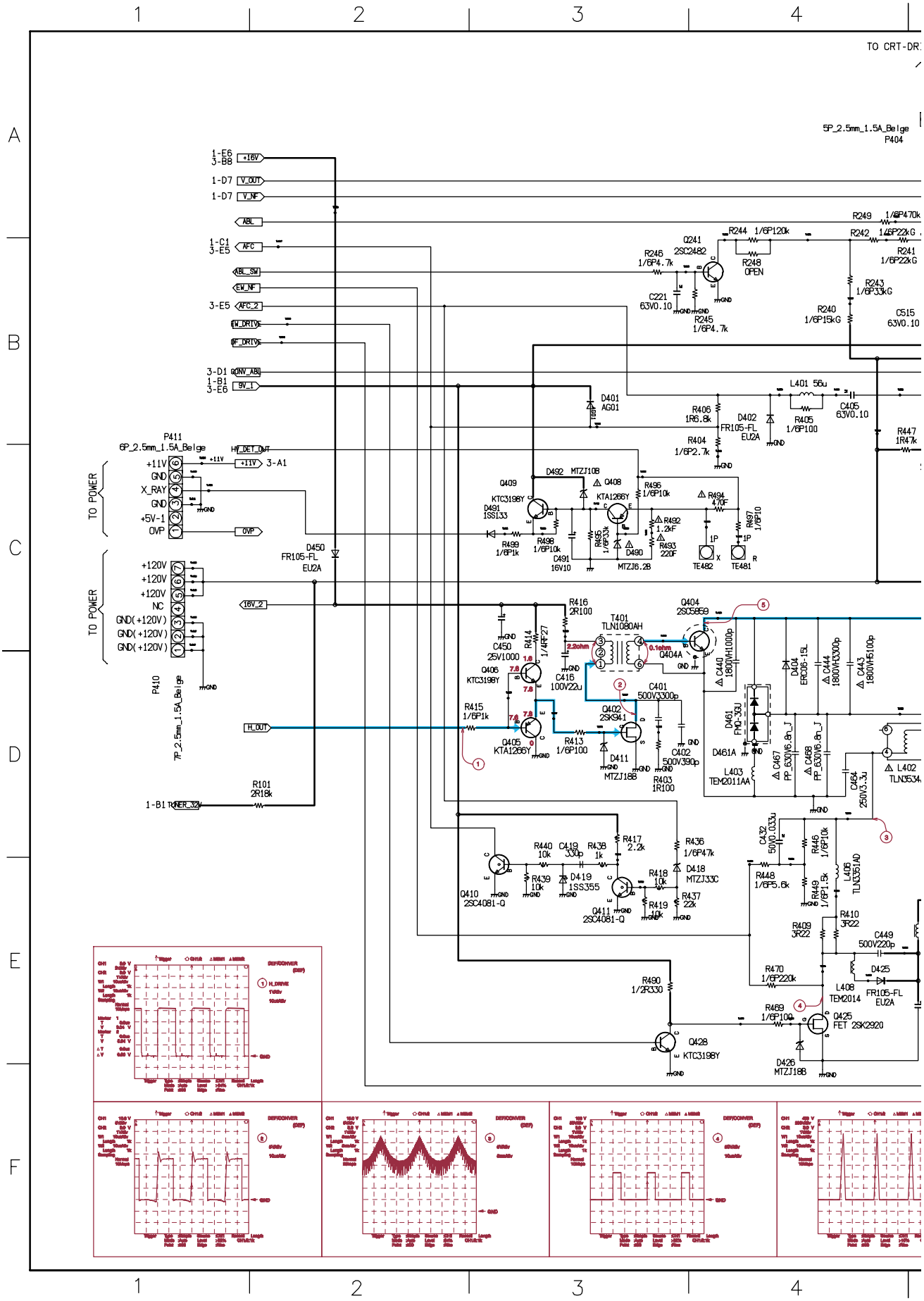


51H83/57H83/65H83
DEF/CONVER - Vertical
[SHEET-1/3]


TO CRT-DRIVE(GREEN) PD0080(P917)
HEATER GND GND NC 220V
5P_2.5mm_1.5A_Beige P404
+16V
V_OUT
V_NF
ABL
AFC
ABL_SW
EW_NF
AFC_2
EW_DRIVE
DF_DRIVE
CONV_ABL
9V_1
HV_DET
P411 6P_2.5mm_1.5A_Beige
TO POWER
+11V GND X_RAY GND +5V-1 OVP
+120V +120V +120V NC GND(+120V) GND(+120V) GND(+120V)
P410 7P_2.5mm_1.5A_Beige
16V_2
H_OUT
TUNER_32V
R101 2R18k
D450 FR105-FL EU2A
Q241 2SC2482
Q420 2SC2482
T461 TFB3092AD
Z450 TPA5010AH
L401 56u
Q409 KTC3198Y
Q408 KTA1266Y
TE482 TE481
P499 1P
C445 200V47n
Z401 SG99B3EN
PLUG 3P_5mm P405
Focus Pack
RED GREEN BLUE
T401 TLN1080AH
Q404 2SC5859
Q406 KTC3198Y
Q405 KTA1266Y
Q402 2SK941
L441 TLN2222AG
C425 400V0.27u
C423 400V0.30u
L442 OPEN
GJ42 0.6
GJ43 0.6
L402 TLN3534AH
T400 TLN2220AL
Q400 2SC4686A
Q410 2SC4081-Q
Q411 2SC4081-Q
L406 TLN3351AD
L407 TEM2014
L408 TEM2014
Q425 FET 2SK2920
Q428 KTC3198Y
P401 6P_5mm_5A
P402 6P_5mm_5A
P403 6P_5mm_5A
L462 TDY707AS(R)
L463 TDY707AS(R)
L464 TDY707AS(R)
(V) (H)
2.65ohm 1ohm
DEF/CONVER (DEF)
H_DRIVE

51H83/57H83/65H83
DEF/CONVER - DEF
[SHEET-2/3]


TO CRT-DR
5P_2.5mm_1.5A_Beige
P404
1-E6 3-B8 +16V
1-D7 V_OUT
1-D7 V_NF
ABL
1-C1 3-E5 AFC
ABL_SW
EW_NF
3-E5 AFC_2
EW_DRIVE
NF_DRIVE
3-D1 CONV_ABL
1-B1 3-E6 9V_1
P411
6P_2.5mm_1.5A_Beige
HV_DET_OUT
+11V
GND
X_RAY
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+5V-1
OVP
TO POWER
3-A1
P410
7P_2.5mm_1.5A_Beige
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16V_2
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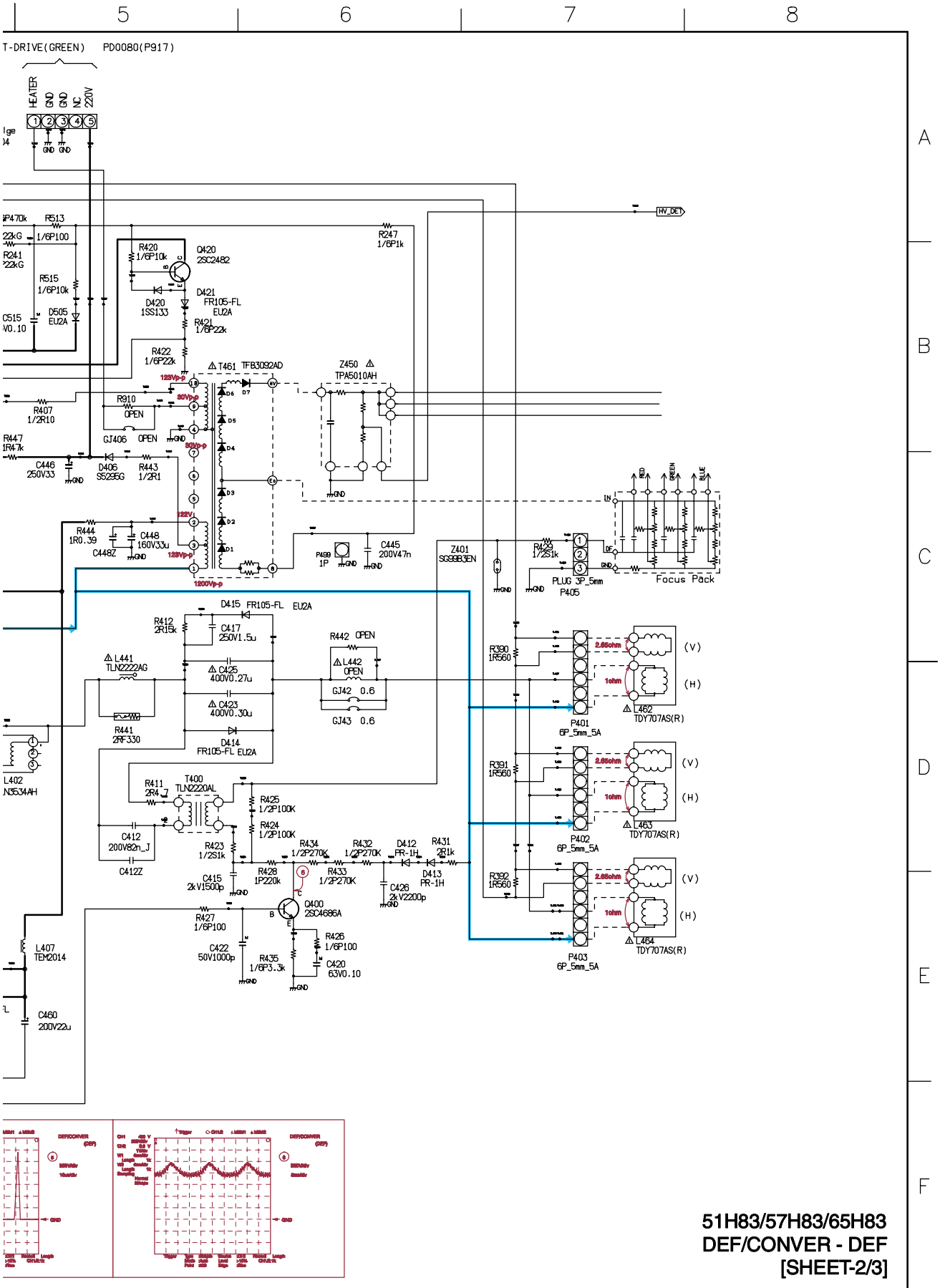
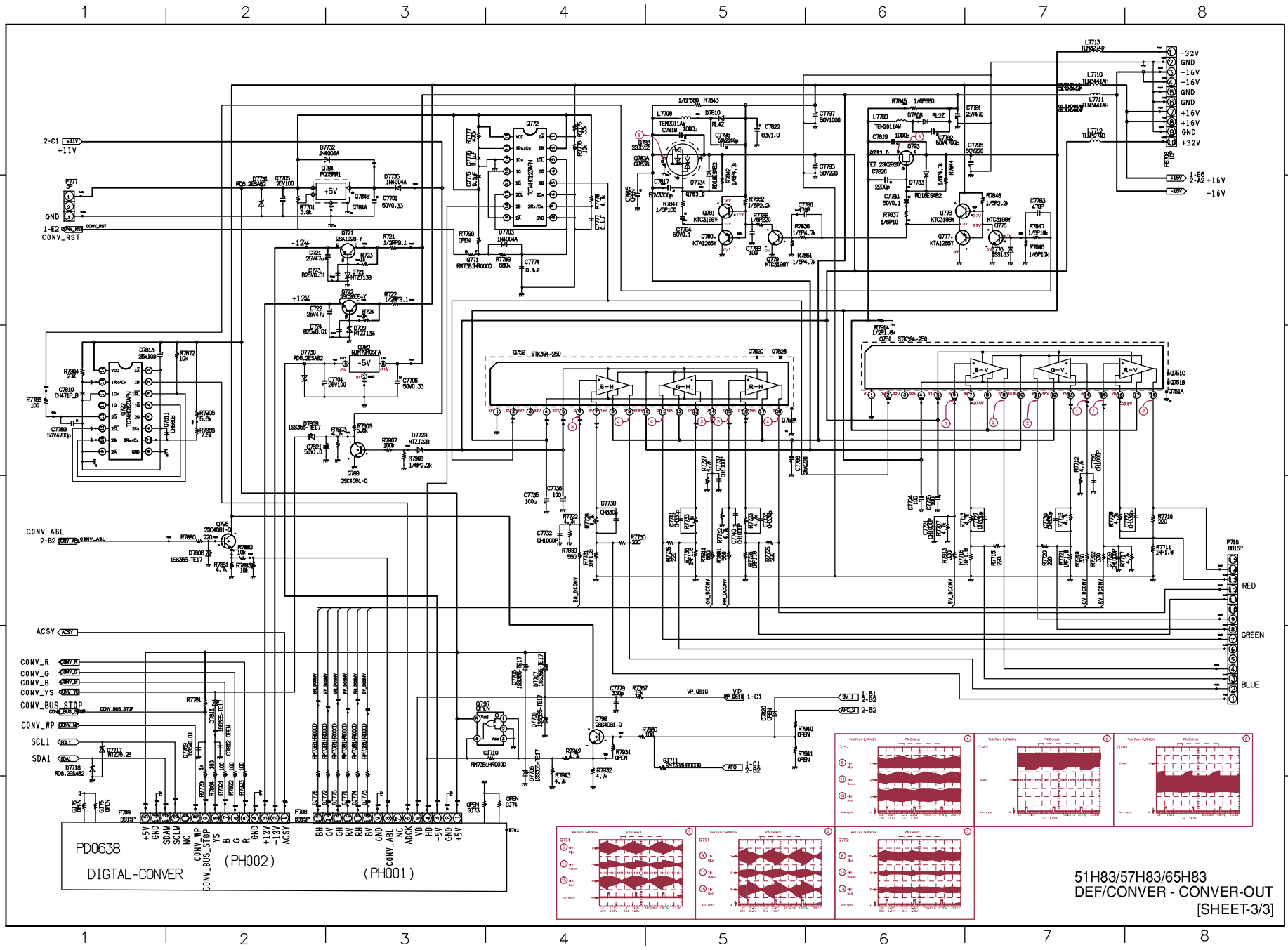
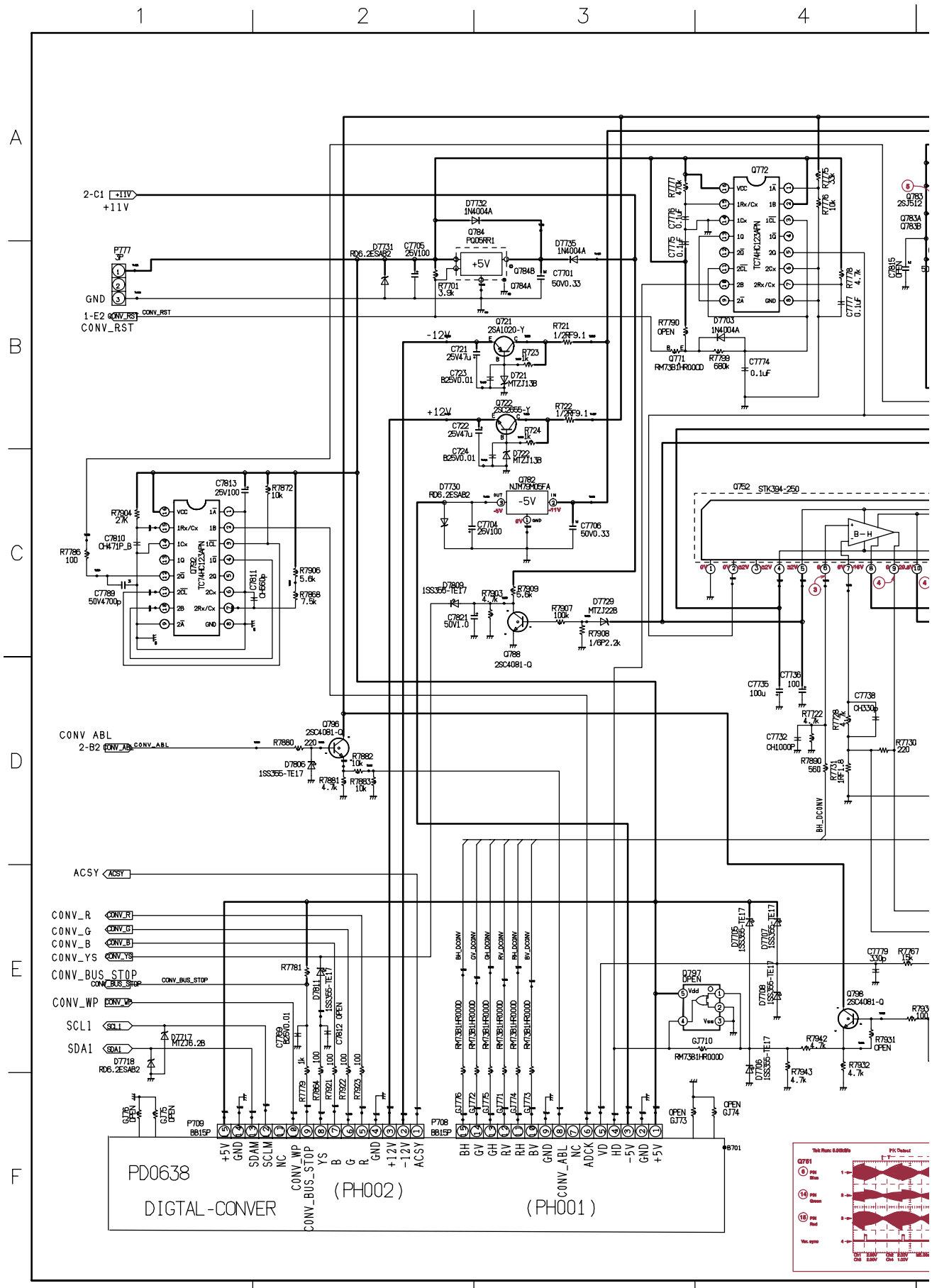
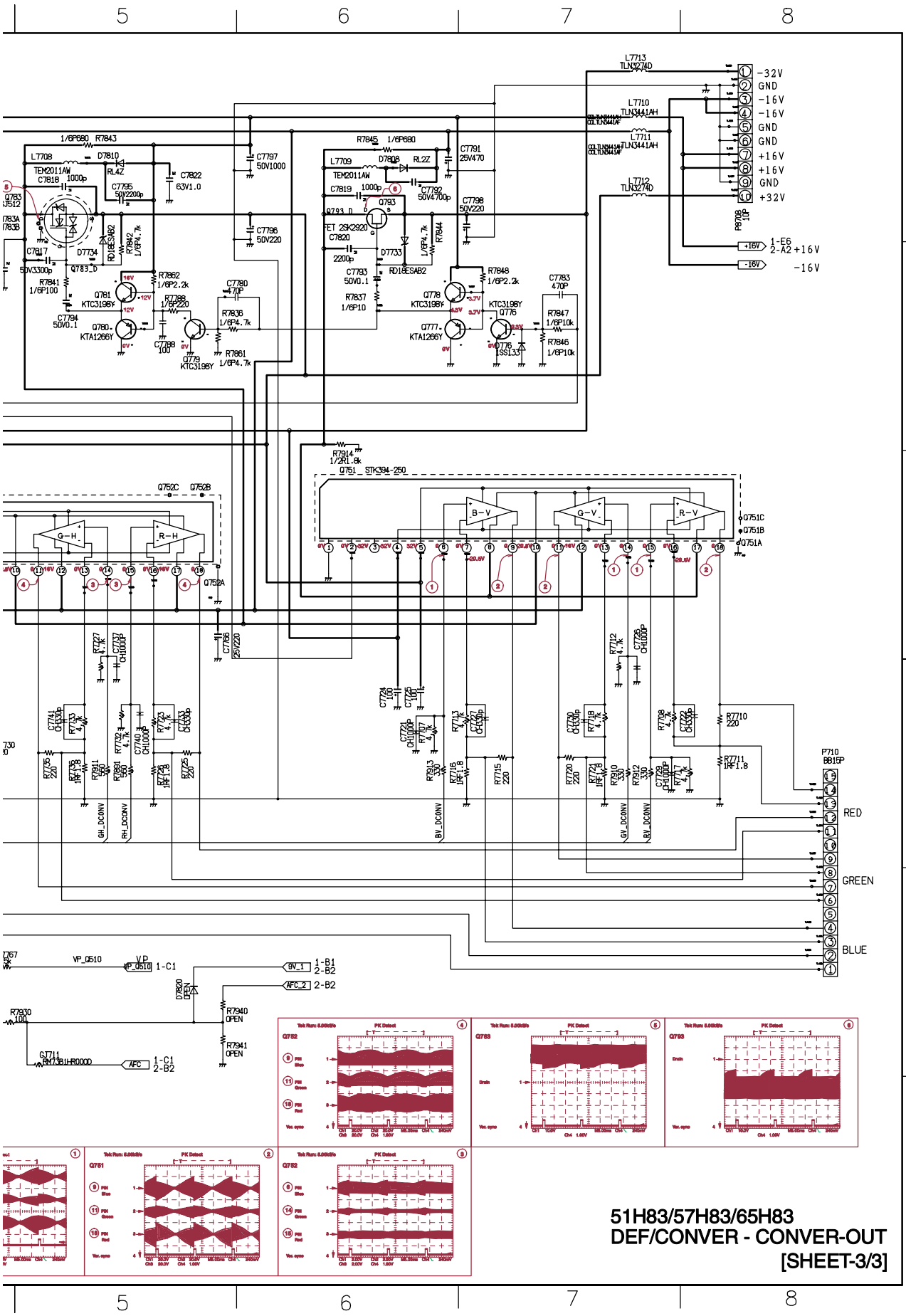
D450 FR105-FL EU2A
D401 AG01
L401 56u
C405 63V0.10
R405 1/6P100
R406 1R6.8k
D402 FR105-FL EU2A
R404 1/6P2.7k
R447 1R47k
R249 1/6P470k
R242 1/6P22kG
R241 1/6P22kG
R244 1/6P120k
R248 OPEN
Q241 2SC2482
R246 1/6P4.7k
C221 63V0.10
R245 1/6P4.7k
R243 1/6P33kG
R240 1/6P15kG
C515 63V0.10
Q409 KTC3198Y
D491 1SS133
D492 MTZJ10B
Q408 KTA1266Y
R496 1/6P10k
R494 4.7OF
R492 1.2kF
R493 220F
R497 1/6P10
R499 1/6P1k
R498 1/6P10k
R495 1/6P33k
C491 16V10
D490 MTZJ6.2B
TE482
TE481
R416 2R100
T401 TLN1080AH
Q404 2SC5859
Q404A
C450 25V1000
R414 1/4RF27
C416 100V22u
Q406 KTC3198Y
C401 500V3300p
Q402 2SK941
R415 1/6P1k
Q405 KTA1266Y
R413 1/6P100
D411 MTZJ18B
C402 500V390p
R403 1R100
C440 1800WH1000p
C444 1800WH3300p
C443 1800WH5100p
D404 ERC06-15L
D461 FMQ-33U
D461A
C467 PP_630V6.8n_J
C468 PP_630V6.8n_J
L403 TEM2011AA
C464 250V3.3u
L402 TLN3534
C432 50V0.033u
R445 1/6P10k
R448 1/6P5.6k
R449 1/6P1.5k
L406 TLN3361AD
R410 3R22
R409 3R22
C449 500V220p
D425
L408 TEM2014
R470 1/6P220k
R469 1/6P100
Q425 FET 2SK2920
D426 MTZJ18B
R436 1/6P47k
R417 2.2k
R440 10k
C419 330p
R438 1k
R418 10k
D418 MTZJ33C
R439 10k
D419 1SS355
R437 22k
Q410 2SC4081-Q
Q411 2SC4081-Q
R419 10k
R490 1/2R330
Q428 KTC3198Y



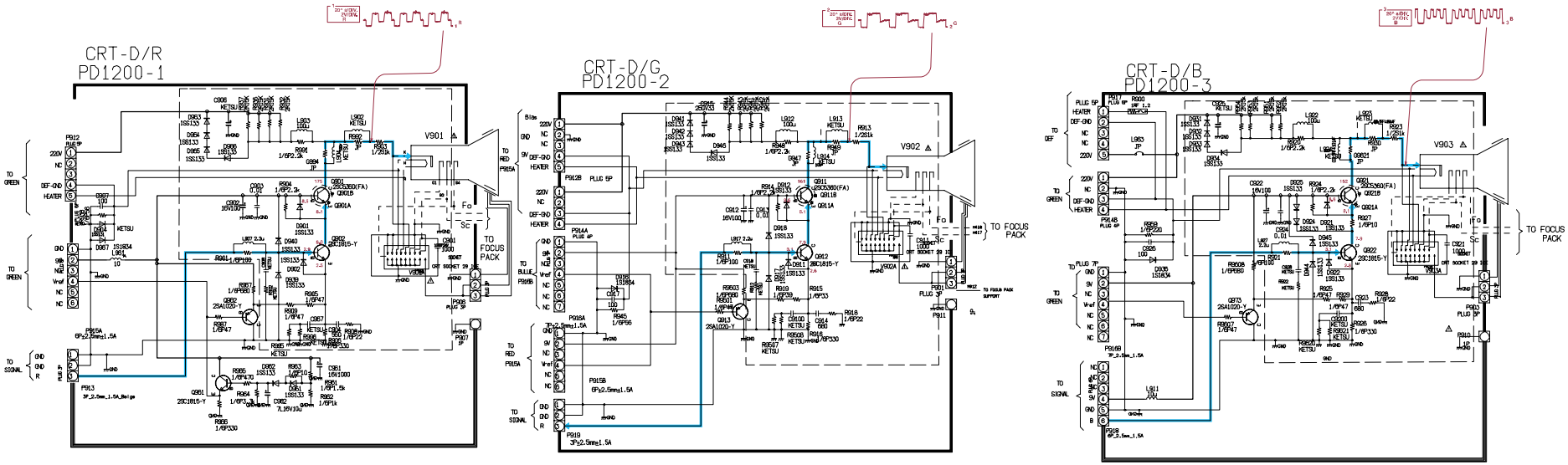
51H83/57H83/65H83
DEF/CONVER - DEF
[SHEET-2/3]

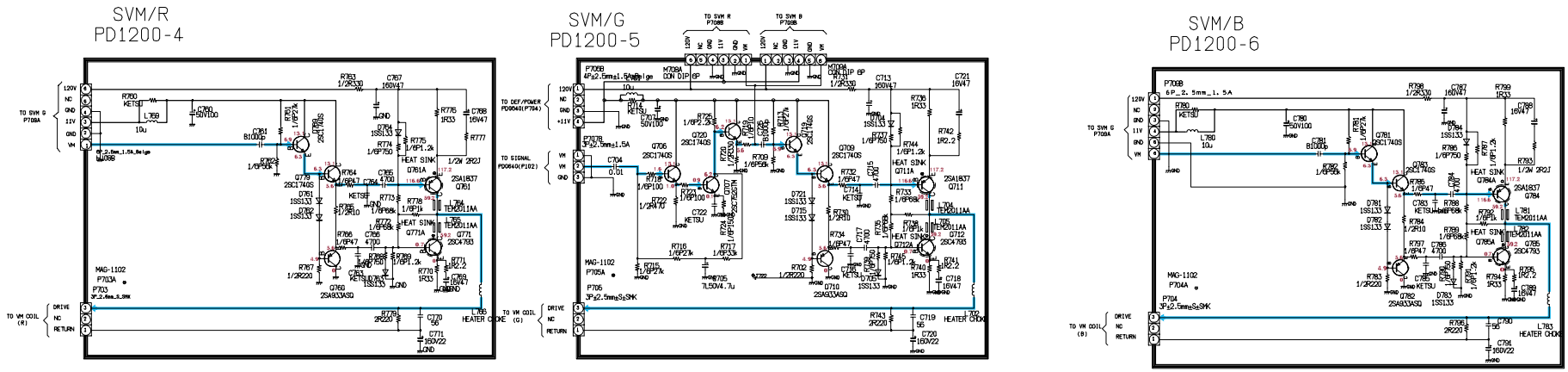

PD0638
DIGTAL-CONVER
(PH002)
(PH001)
51H83/57H83/65H83
DEF/CONVER - CONVER-OUT
[SHEET-3/3]

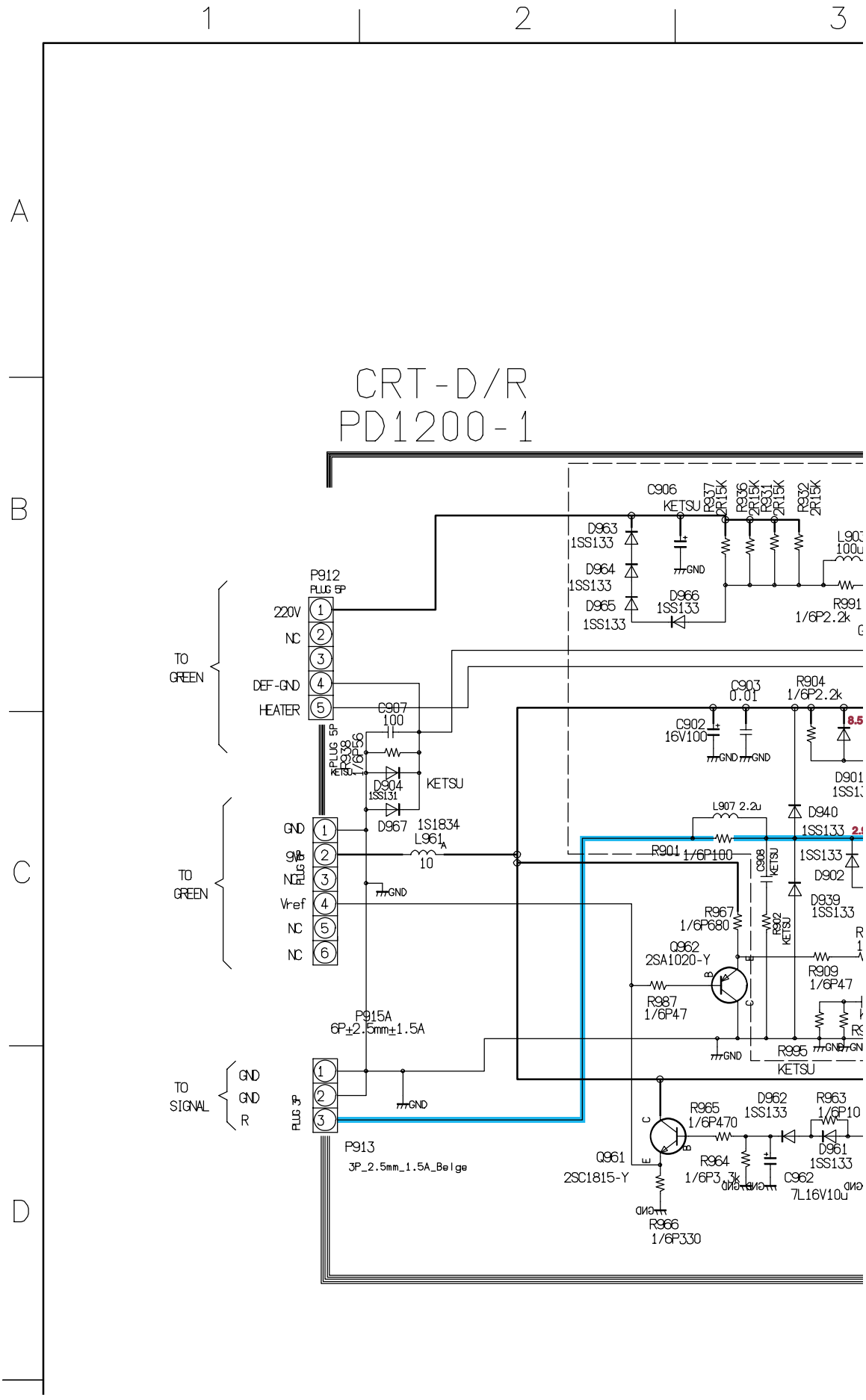

PD0638
DIGTAL-CONVER
(PH002)
(PH001)
2-C1 +11V
+11V
GND
1-E2 CONV_RST
CONV_RST
CONV ABL
2-B2 CONV_ABL
ACSY
CONV_R
CONV_G
CONV_B
CONV_YS
CONV_BUS_STOP
CONV_WP
SCL1
SDA1
+12V
-12V
-5V
+5V
P709 8815P
P708 8815P
P777
Q772
TC74HC123APN
Q784
PQ05RR1
Q721 2SA1020-Y
Q722 2SC2655-Y
Q782 NJM79M05FA
Q752 STK394-250
Q788 2SC4081-Q
Q796 2SC4081-Q
Q798 2SC4081-Q
Q771 RM73B1HR000D
GJ710 RM73B1HR000D
D7732 1N4004A
D7735 1N4004A
D7703 1N4004A
D7730 RD6.2ESAB2
D7731 RD6.2ESAB2
D7718 RD6.2ESAB2
D7721 MTZJ13B
D7722 MTZJ13B
D7729 MTZJ22B
D7717 MTZJ6.2B
D7796 1SS355-TE17
D7797 OPEN
R7701 3.9k
R7721 1/2RF9.1
R7722 1/2RF9.1
R7790 OPEN
R7793 680k
R7872 10k
R7906 5.6k
R7868 7.5k
R7909 5.6k
R7907 100k
R7908 1/6P2.2k
R7880 220
R7882 10k
R7883 10k
R7881 4.7k
R7730 220
R7731 1R/1.8
R7890 560
R7931 OPEN
R7932 4.7k
R7942 4.7k
R7943 4.7k
C7701 50V0.33
C7704 25V100
C7705 25V100
C7706 50V0.33
C7735 100u
C7736 100
C7738 CH330p
C7732 CH1000P
C7774 0.1uF
C7779 330p
C7767 15k
C7789 50V4700p
C7810 CH471P_B
C7811 CH560p
C7813 25V100
C7821 50V1.0
C7789 B25V0.01
C7812 OPEN
GJ73 OPEN
GJ74 OPEN
GJ75 OPEN
GJ76 OPEN
B701
BH_DCONV
GV_DCONV
GH_DCONV
RV_DCONV
RH_DCONV
BV_DCONV

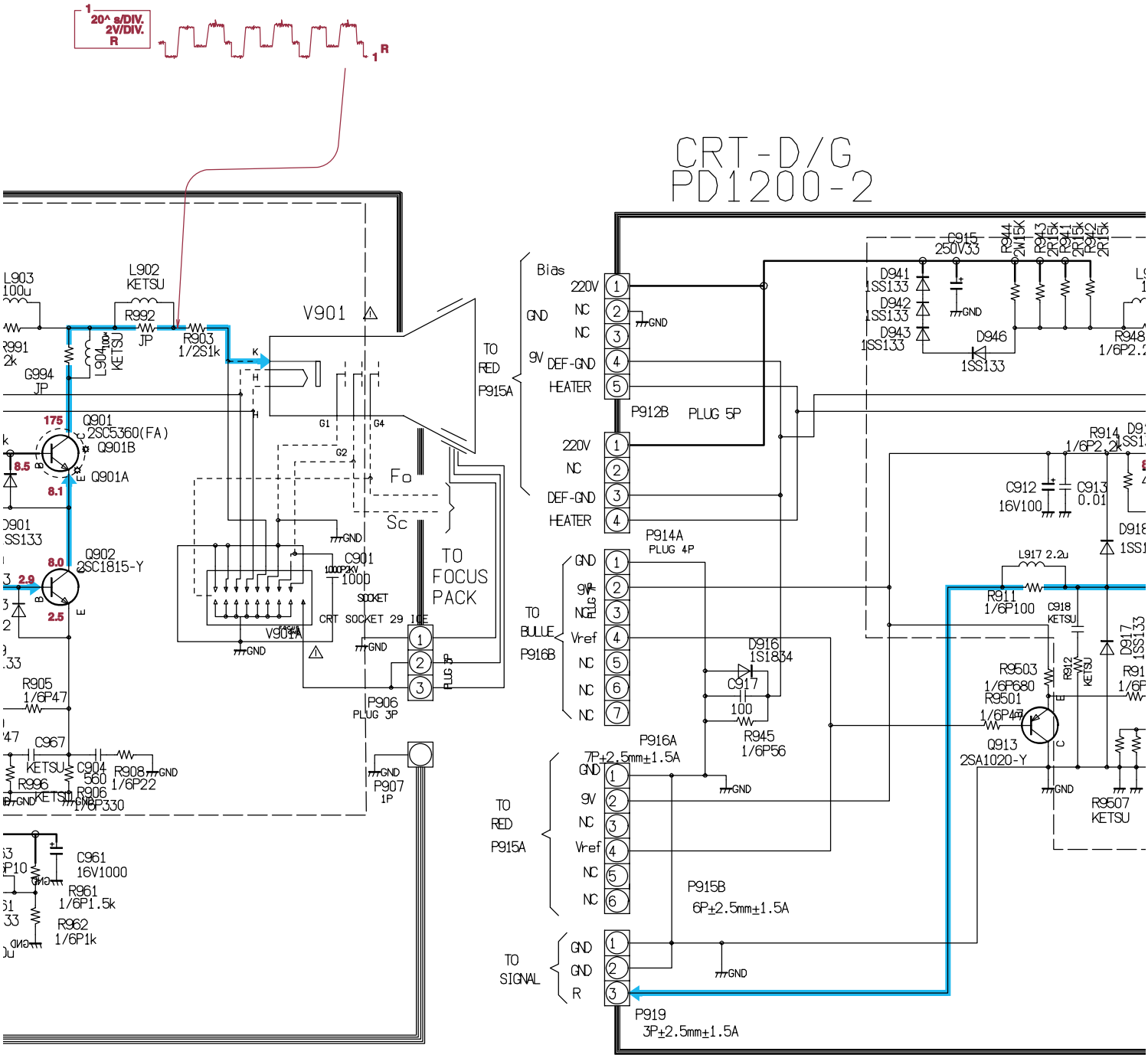


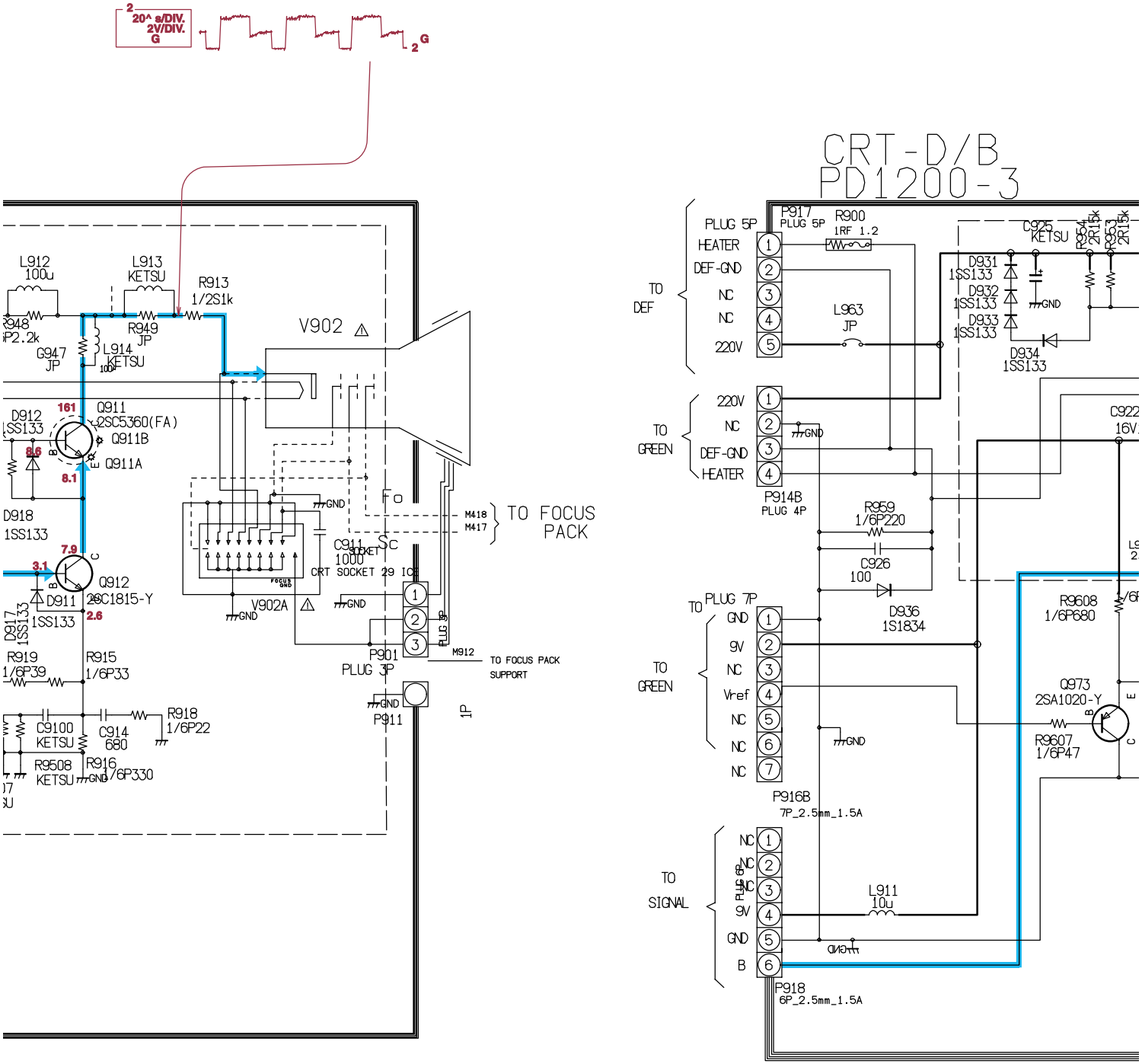
51H83/57H83/65H83
DEF/CONVER - CONVER-OUT
[SHEET-3/3]

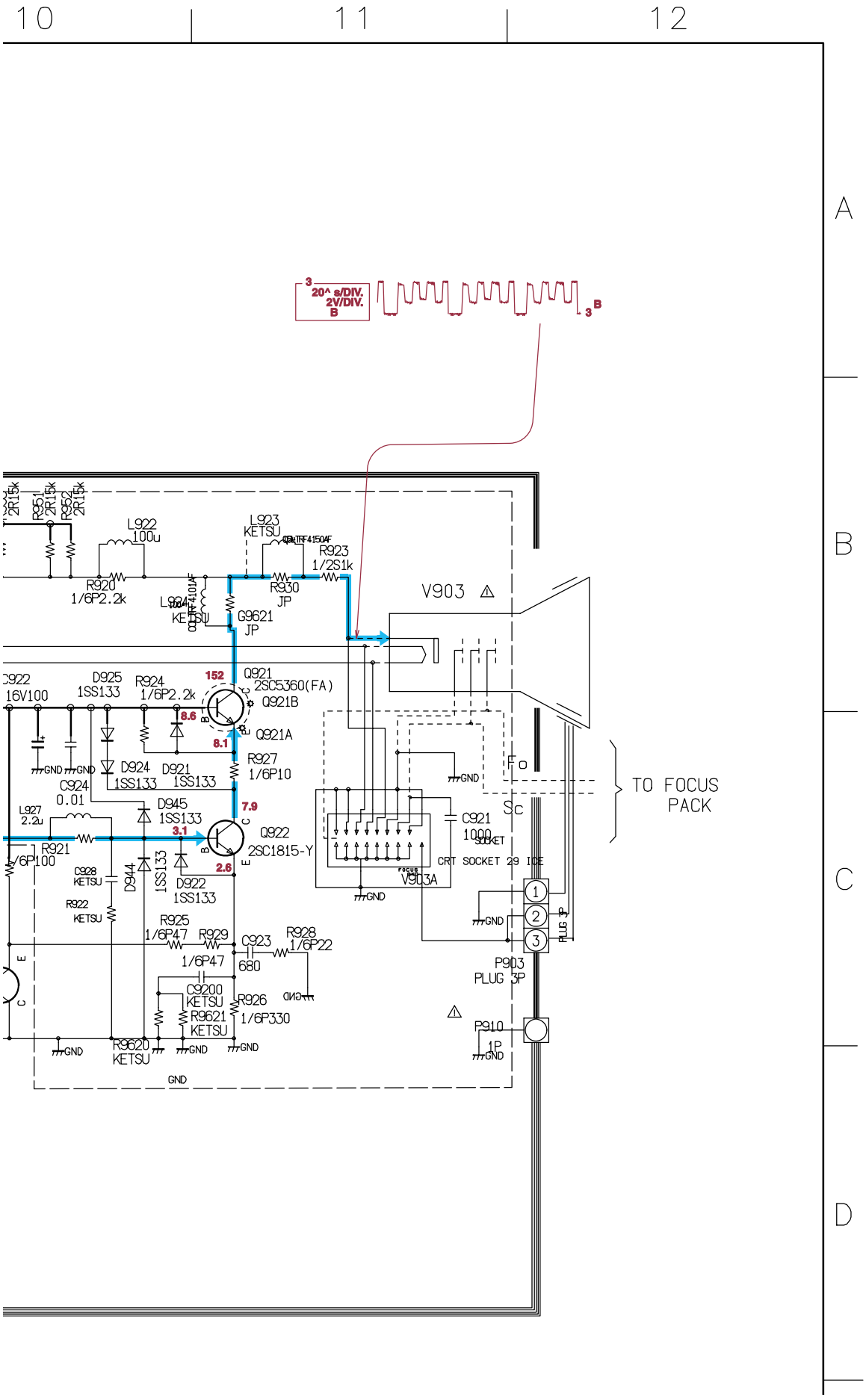

CRT-D/R
PD1200-1
CRT-D/G
PD1200-2
CRT-D/B
PD1200-3
TO FOCUS PACK


SVM/R
PD1200-4
SVM/G
PD1200-5
SVM/B
PD1200-6

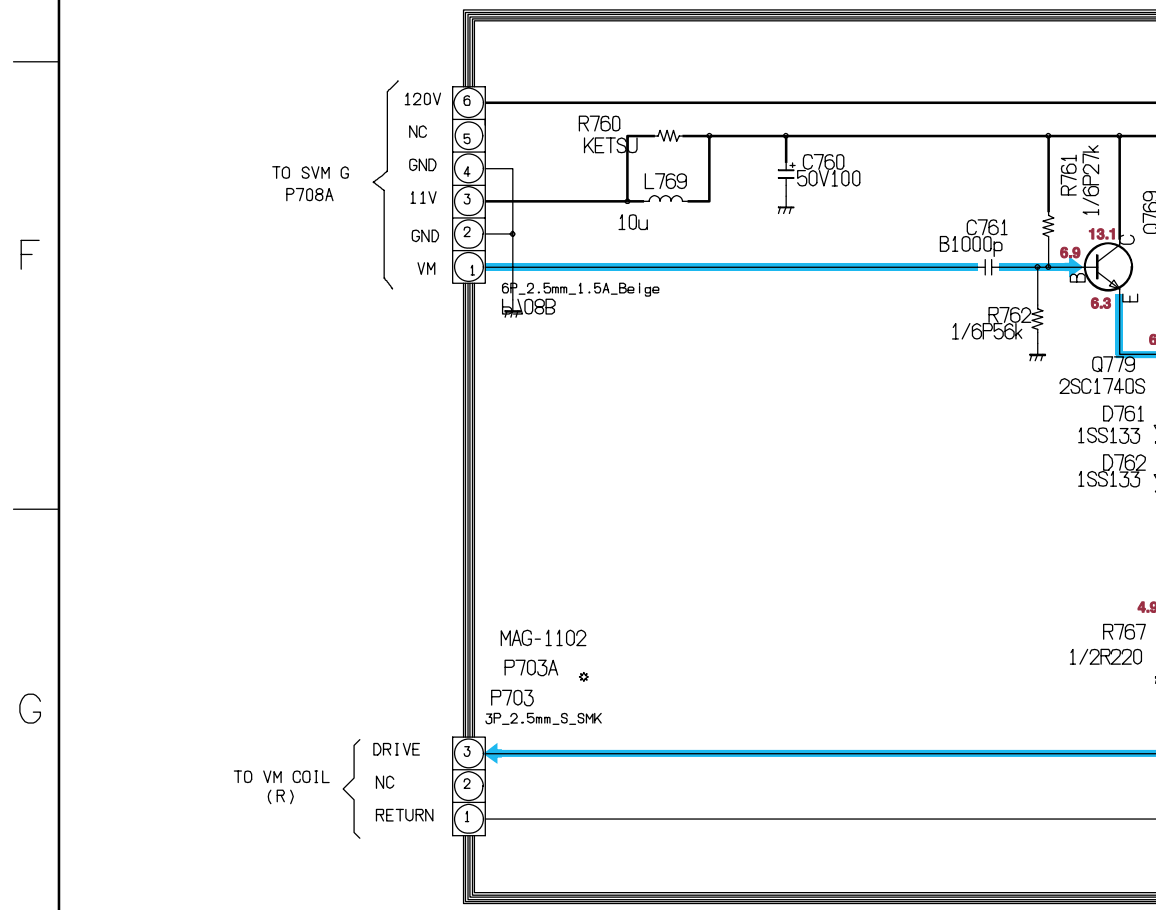

1
2
3
A
B
C
D
CRT-D/R
PD1200-1
P912
PLUG 5P
220V
NC
DEF-GND
HEATER
TO
GREEN
C906
KETSU
R937
2R15K
R936
2R15K
R931
2R15K
R932
2R15K
D963
1SS133
D964
1SS133
D965
1SS133
D966
1SS133
R991
1/6P2.2k
C907
100
R938
1/6P56
D904
1SS131
KETSU
C903
0.01
R904
1/6P2.2k
C902
16V100
GND
GND
GND
PLUG 6P
GND
9V
NC
Vref
NC
NC
TO
GREEN
D967
1S1834
L961
10
L907 2.2u
D940
1SS133
R901
1/6P100
C908
KETSU
D902
D939
1SS133
R967
1/6P680
R902
KETSU
Q962
2SA1020-Y
R909
1/6P47
R987
1/6P47
P915A
6P±2.5mm±1.5A
GND
GND
R
TO
SIGNAL
PLUG 3P
R995
KETSU
R965
1/6P470
D962
1SS133
R963
1/6P10
D961
1SS133
Q961
2SC1815-Y
R964
1/6P3.3k
C962
7L16V10u
R966
1/6P330
P913
3P_2.5mm_1.5A_Belge


CRT-D/G
PD1200-2
1
20^ s/DIV.
2V/DIV.
R
V901
L902
KETSU
L903
100u
R992
JP
R903
1/2S1k
G994
JP
L904
KETSU
Q901
2SC5360(FA)
Q901B
Q901A
Q902
2SC1815-Y
C901
100p
SOCKET
CRT SOCKET 29 IDE
V901A
TO
RED
P915A
TO
FOCUS
PACK
P906
PLUG 3P
R905
1/6P47
C967
KETSU
C904
560
R908
1/6P22
R906
1/6P330
C961
16V1000
R961
1/6P1.5k
R962
1/6P1k
P907
1P
Bias
220V
GND
NC
NC
9V
DEF-GND
HEATER
P912B PLUG 5P
220V
NC
DEF-GND
HEATER
P914A
PLUG 4P
GND
9V
NC
Vref
NC
NC
TO
BULUE
P916B
P916A
7P±2.5mm±1.5A
GND
9V
NC
Vref
NC
NC
TO
RED
P915A
P915B
6P±2.5mm±1.5A
TO
SIGNAL
GND
GND
R
P919
3P±2.5mm±1.5A
C915
250V33
D941
1SS133
D942
1SS133
D943
1SS133
D946
1SS133
R944
2W15K
R943
2R15k
R941
2R15k
R942
2R15k
R948
1/6P2.2
R914
1/6P2.2k
C912
16V100
C913
0.01
L917 2.2u
R911
1/6P100
C918
KETSU
D916
1S1834
C917
100
R945
1/6P56
R9503
1/6P680
R9501
1/6P47
Q913
2SA1020-Y
R912
KETSU
R9507
KETSU
GND


CRT-D/B
PD1200-3
2
20^ s/DIV.
2V/DIV.
G
2 G
L912
100u
L913
KETSU
R913
1/2S1k
R949
JP
G947
JP
L914
KETSU
V902
Q911
2SC5360(FA)
Q911B
Q911A
D912
1SS133
D918
1SS133
Q912
2SC1815-Y
D911
1SS133
R919
1/6P39
R915
1/6P33
C9100
KETSU
C914
680
R9508
KETSU
R916
1/6P330
R918
1/6P22
C911
1000
CRT SOCKET 29 1CE
V902A
P901
PLUG 3P
M418
M417
M912
TO FOCUS PACK
TO FOCUS PACK SUPPORT
P911
1P
P917
PLUG 5P
R900
1RF 1.2
PLUG 5P
HEATER
DEF-GND
NC
NC
220V
TO DEF
L963
JP
D931
1SS133
D932
1SS133
D933
1SS133
D934
1SS133
C925
KETSU
R954
2R15k
R953
2R15k
220V
NC
DEF-GND
HEATER
TO GREEN
P914B
PLUG 4P
R959
1/6P220
C926
100
D936
1S1834
PLUG 7P
GND
9V
NC
Vref
NC
NC
NC
TO GREEN
P916B
7P_2.5mm_1.5A
R9608
1/6P680
Q973
2SA1020-Y
R9607
1/6P47
NC
NC
NC
9V
GND
B
TO SIGNAL
L911
10u
P918
6P_2.5mm_1.5A


10
11
12
A
B
C
D
3
20^ s/DIV.
2V/DIV.
B
3 B
V903
L922
100u
L923
KETSU
R923
1/2S1k
R920
1/6P2.2k
R930
JP
G9621
JP
L924
KETSU
R951
2R15k
R952
2R15k
C922
16V100
D925
1SS133
R924
1/6P2.2k
152
Q921
2SC5360(FA)
Q921B
Q921A
8.6
8.1
R927
1/6P10
D924
1SS133
D921
1SS133
C924
0.01
D945
1SS133
7.9
3.1
Q922
2SC1815-Y
L927
2.2u
R921
1/6P100
C928
KETSU
D944
1SS133
D922
1SS133
2.6
R922
KETSU
R925
1/6P47
R929
1/6P47
C923
680
R928
1/6P22
C9200
KETSU
R9621
KETSU
R926
1/6P330
R9620
KETSU
GND
C921
1000
SOCKET
CRT SOCKET 29 IDE
V903A
FOCUS
TO FOCUS
PACK
P903
PLUG 3P
P910
1P
PLUG 3P
1
2
3

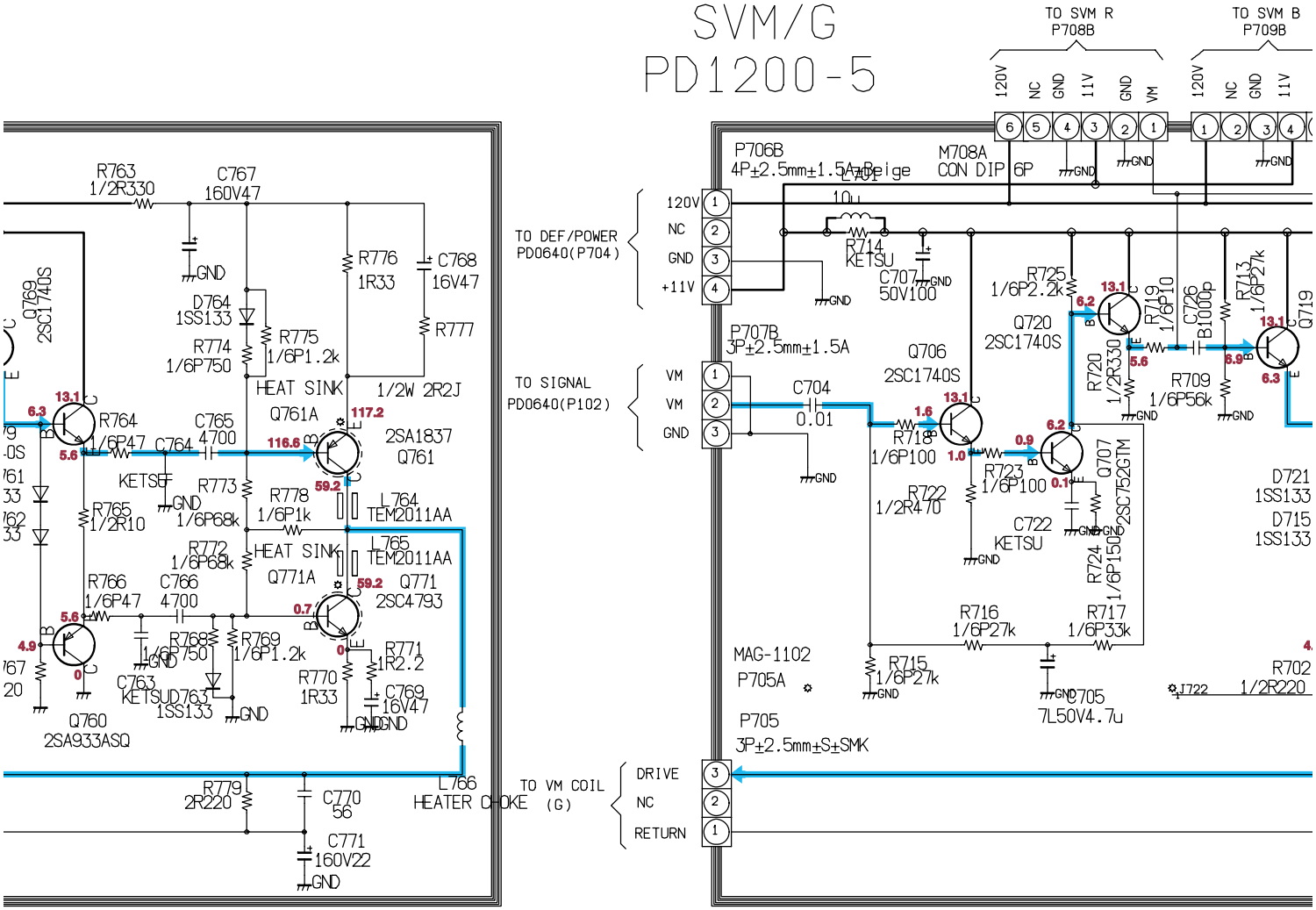
SVM/R
PD1200-4



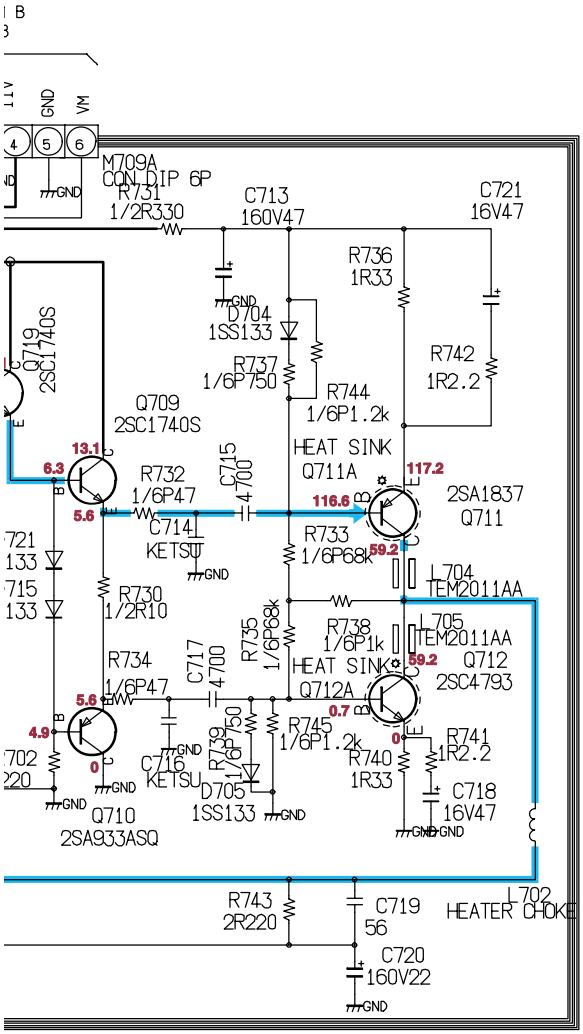
E F G H

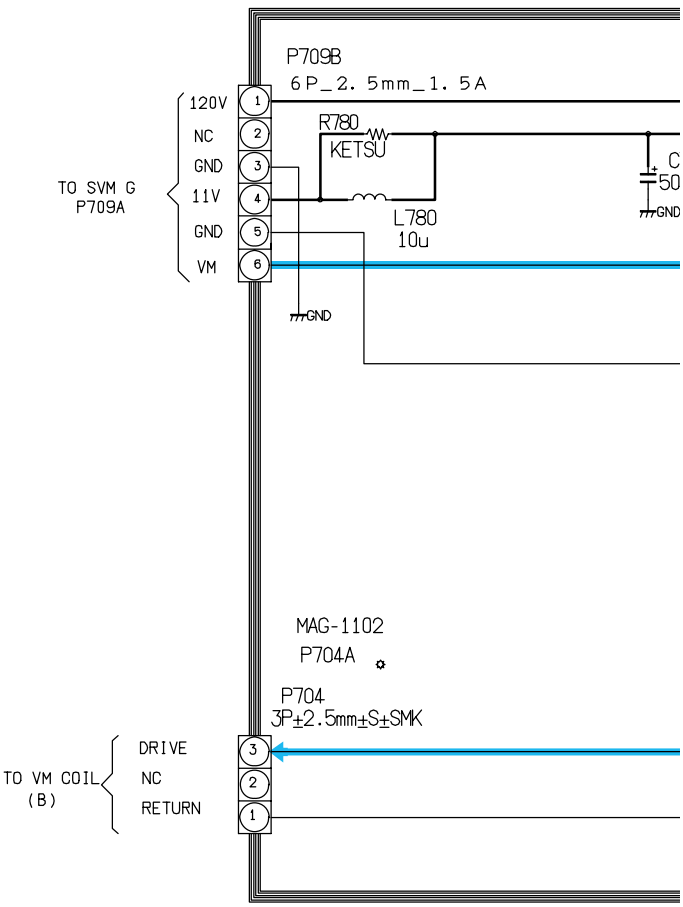
1 2 3

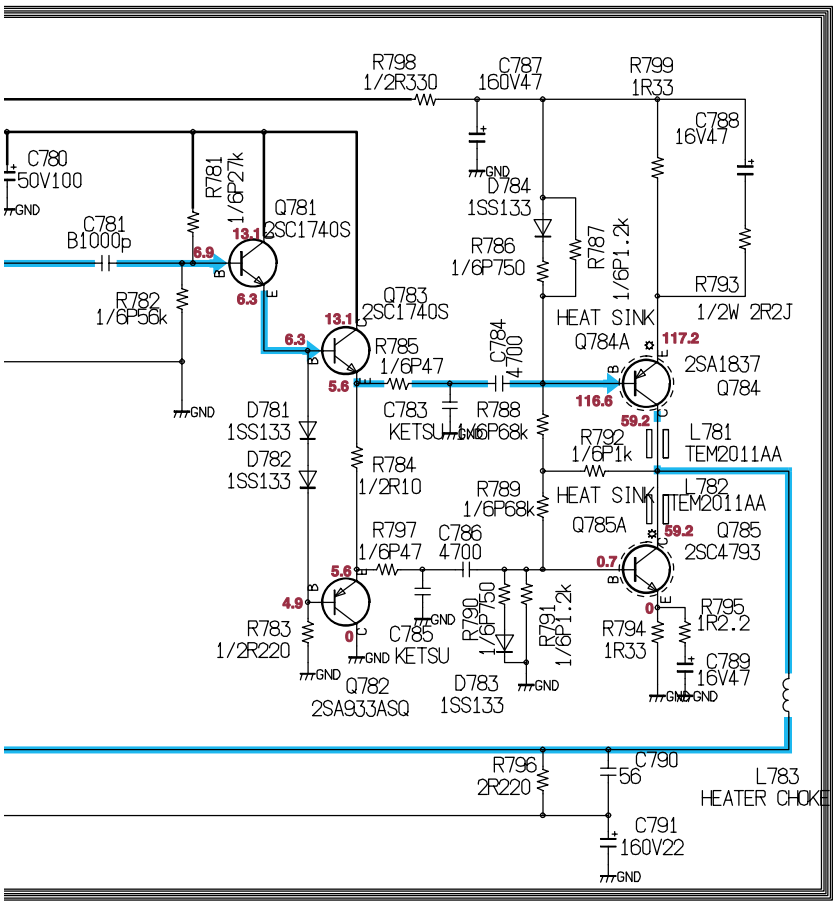
SVM/G
PD1200-5



SVM/B
PD1200-6







51H83
CRT/SVM

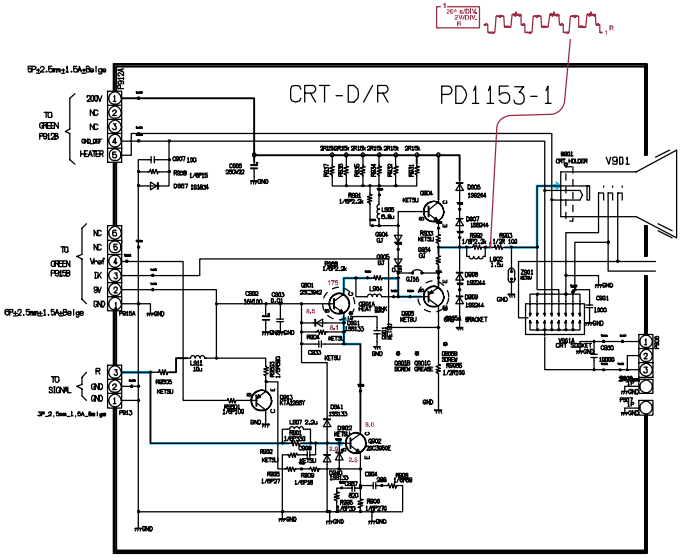
E

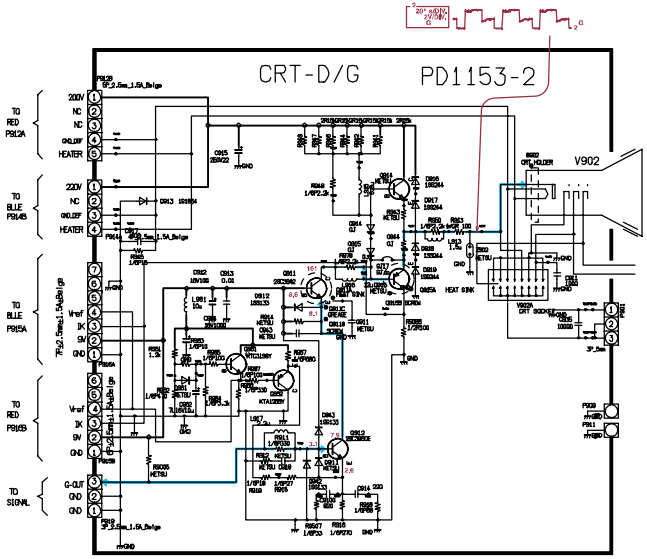
F

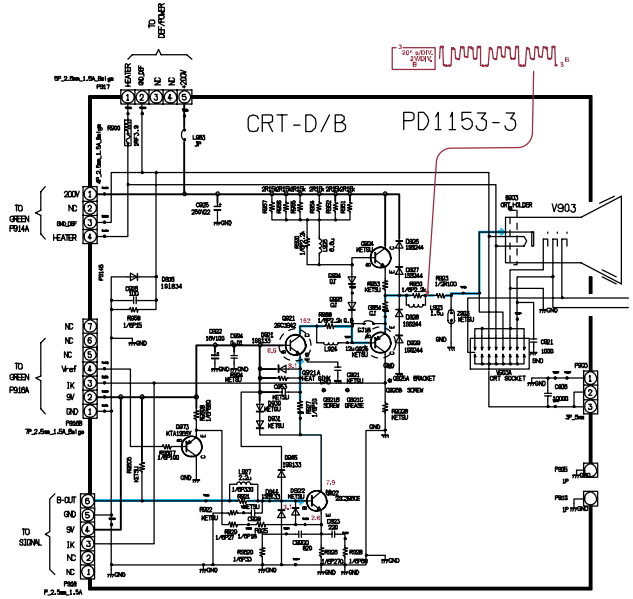
G

H

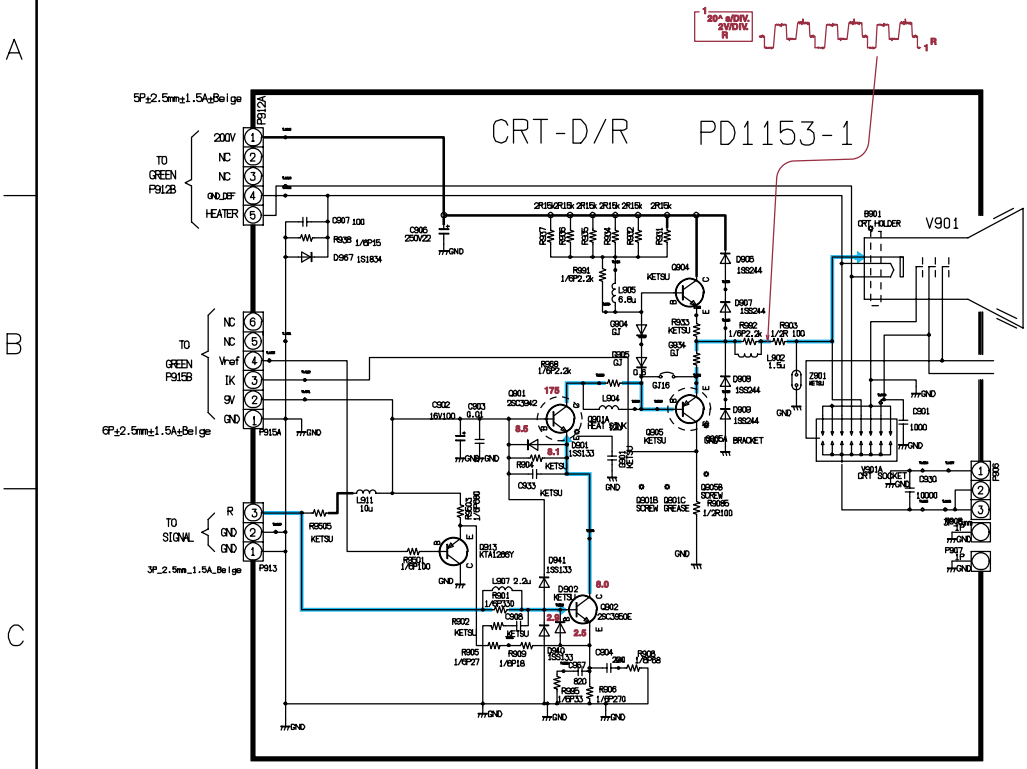
10 | 11 | 12

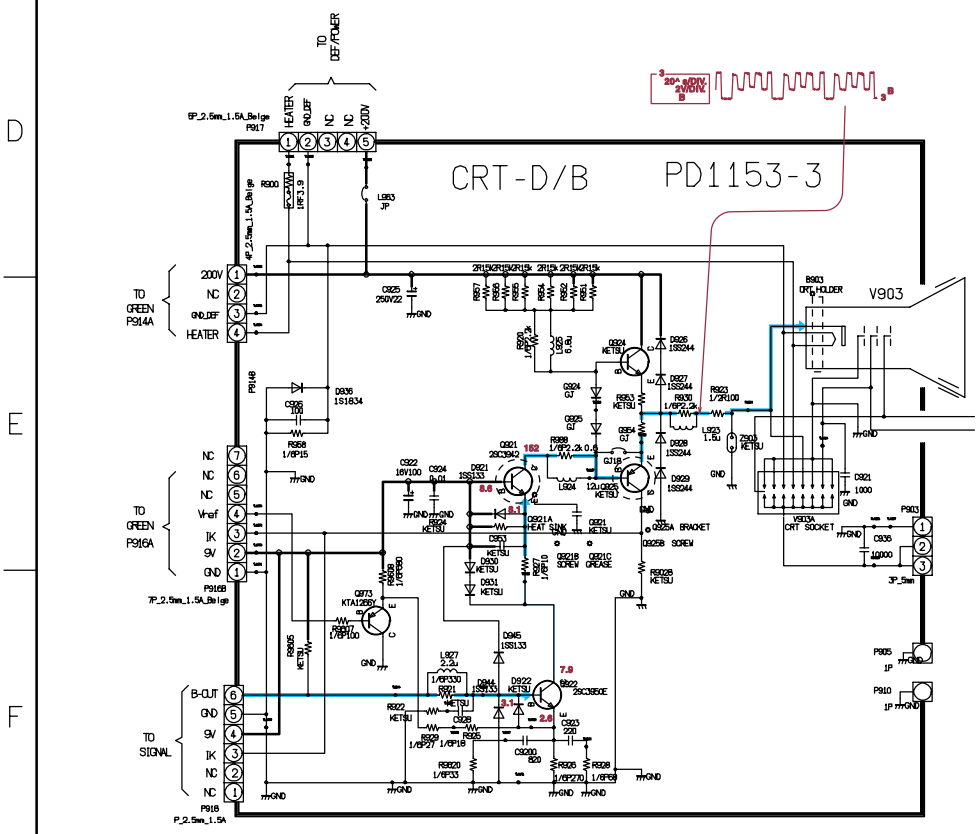


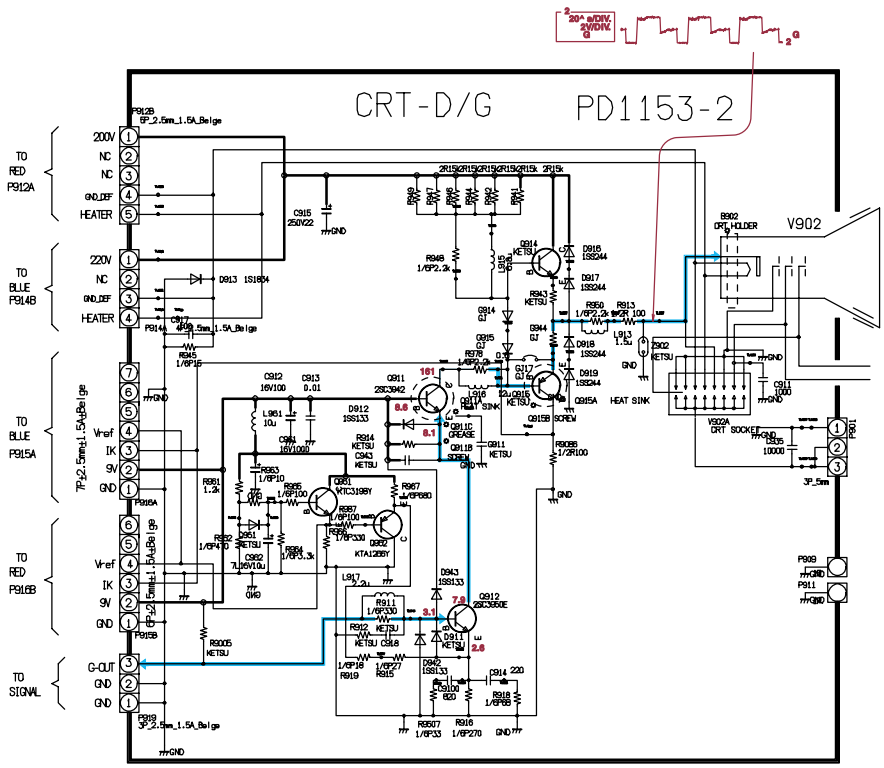




57H83/65H83
CRTSVM - CRT-DRIVE
[SHEET-1/2]

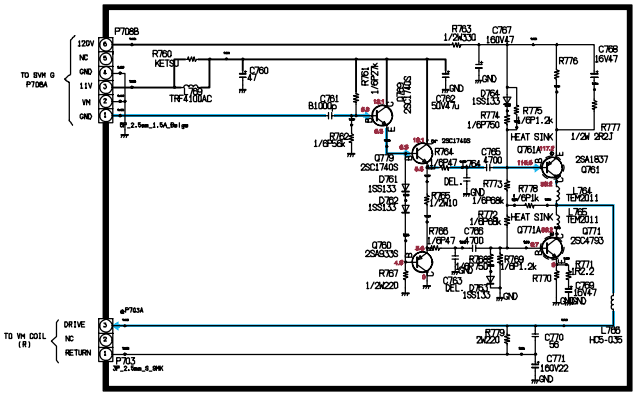

CRT-D/R PD1153-1
V901
TO GREEN P912B
TO GREEN P915B
TO SIGNAL
6P±2.5mm±1.5A±Beige
3P_2.5mm_1.5A_Beige


CRT-D/B PD1153-3
V903
TO DEF/POWER
TO GREEN P914A
TO GREEN P916A
TO SIGNAL
6P_2.5mm_1.5A_Beige
7P_2.5mm_1.5A_Beige
P_2.5mm_1.5A

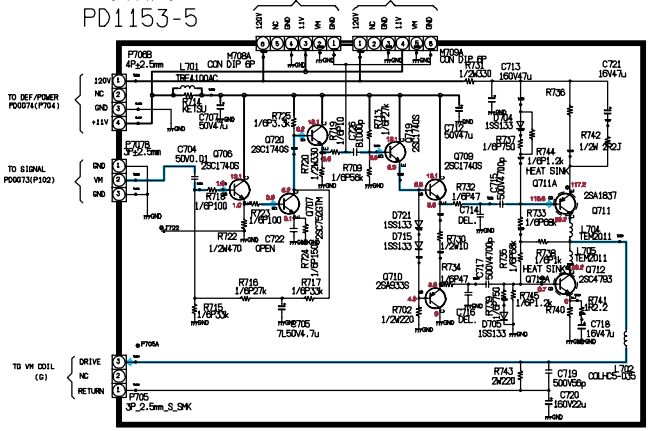


57H83/65H83
CRTSVM - CRT-DRIVE
[SHEET-1/2]

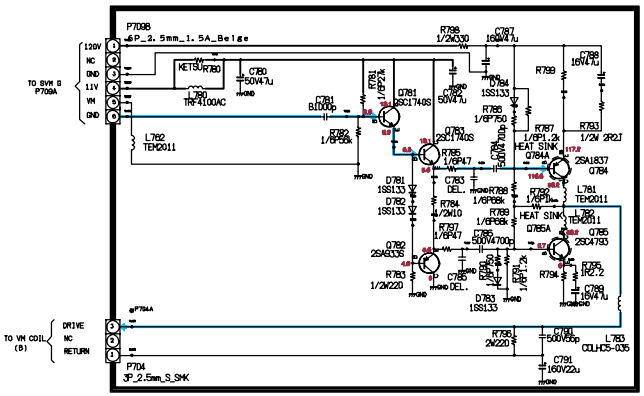
SVM/R
PD1153-4



SVM/G
PD1153-5

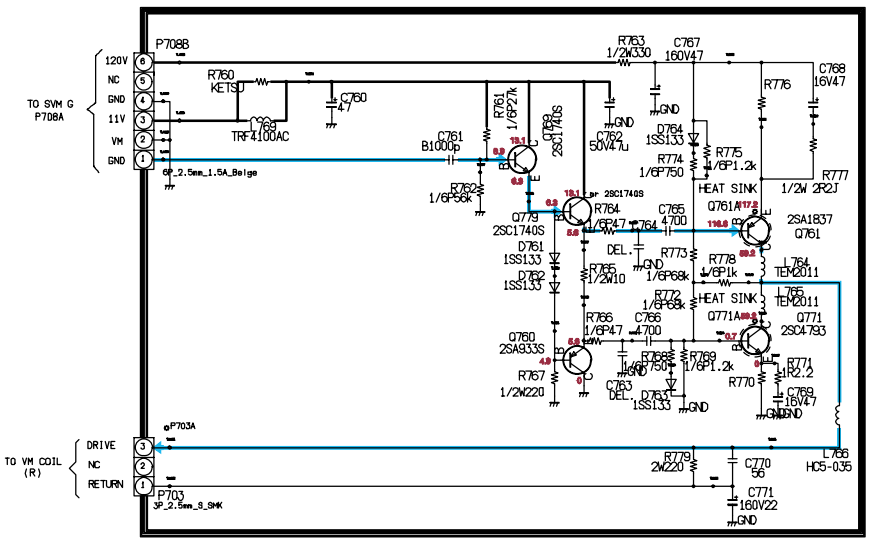


SVM/B
PD1153-6

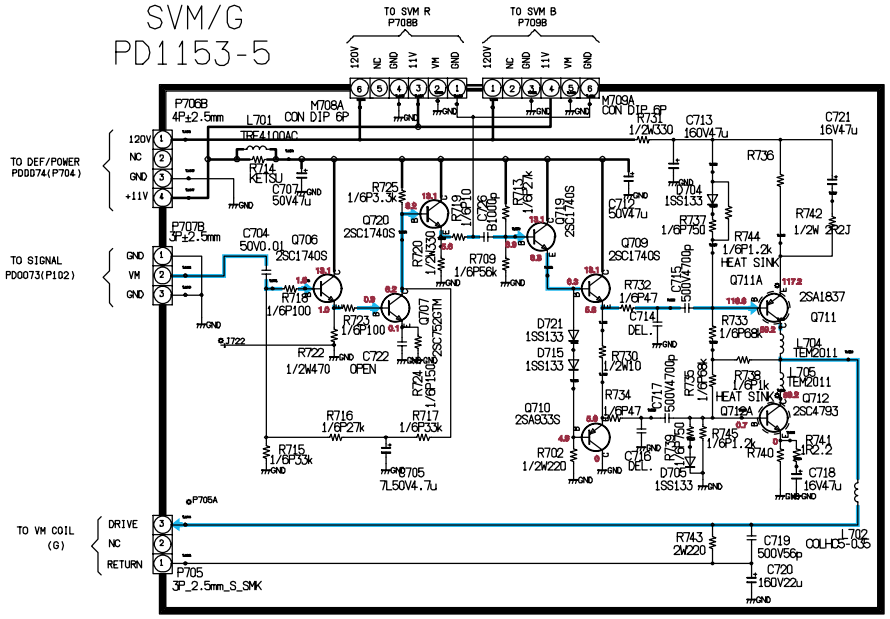


57H83/65H83
CRTSVM - SVM
[SHEET-2/2]

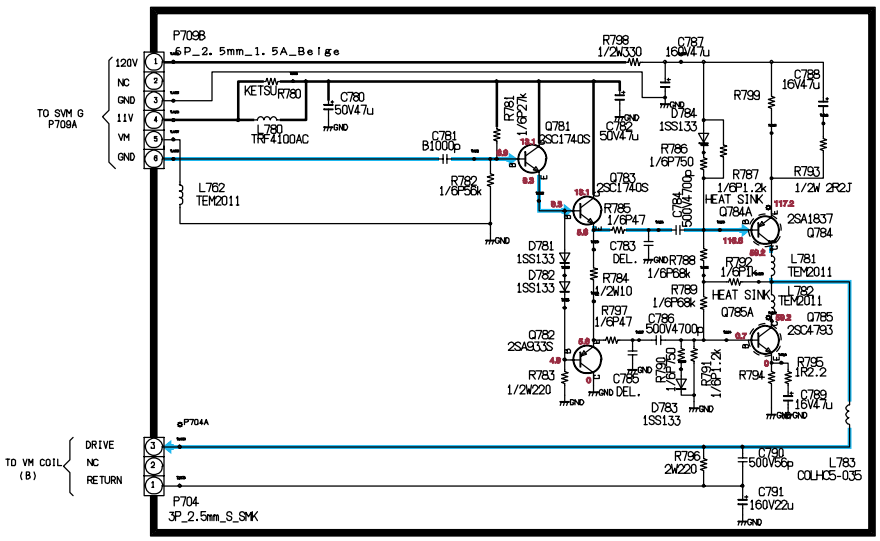
SVM/R
PD1153-4



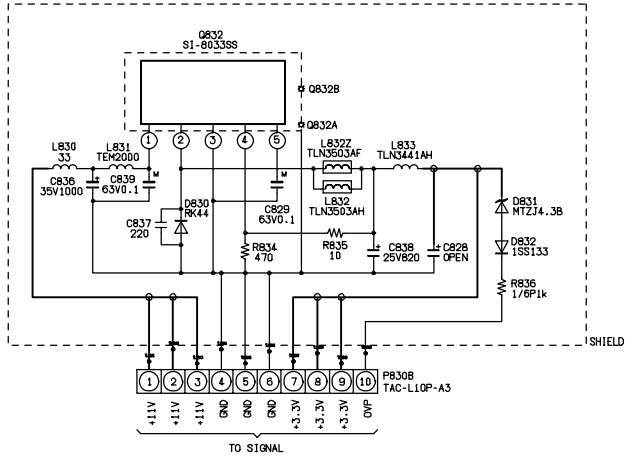
SVM/G
PD1153-5



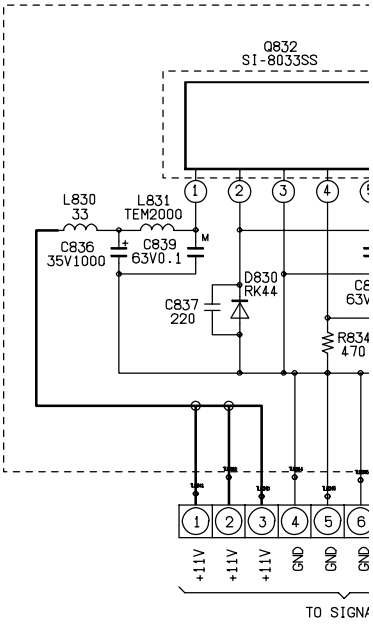
SVM/B
PD1153-6

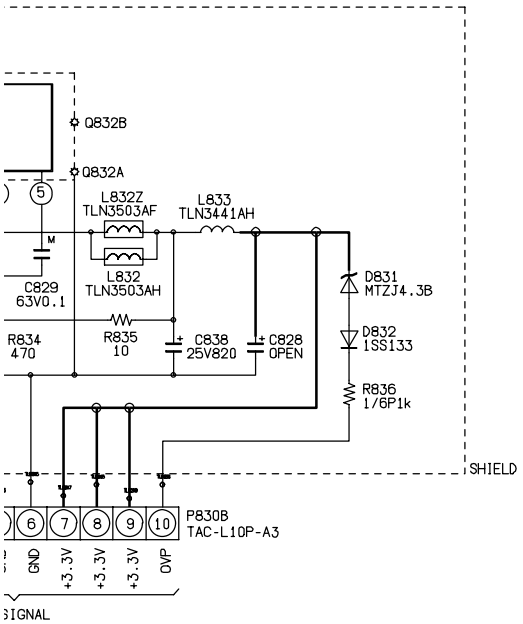


57H83/65H83
CRTSVM - SVM
[SHEET-2/2]



51H83/57H83/65H83
DD-CON(1/2)

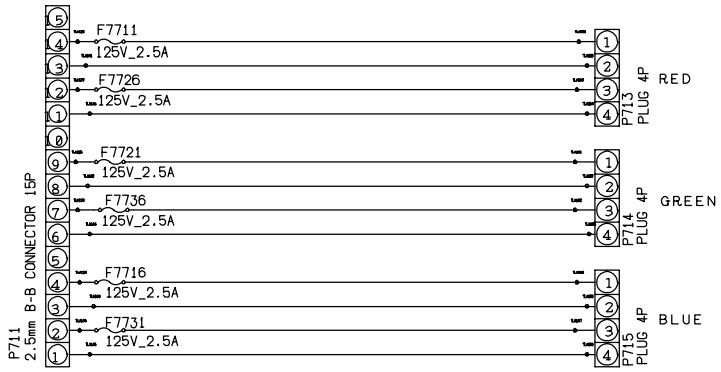

Q832
SI-8033SS
L830
33
L831
TEM2000
C836
35V1000
C839
63V0.1
D830
RK44
C837
220
1
2
3
4
5
6
+11V
+11V
+11V
GND
GND
GND



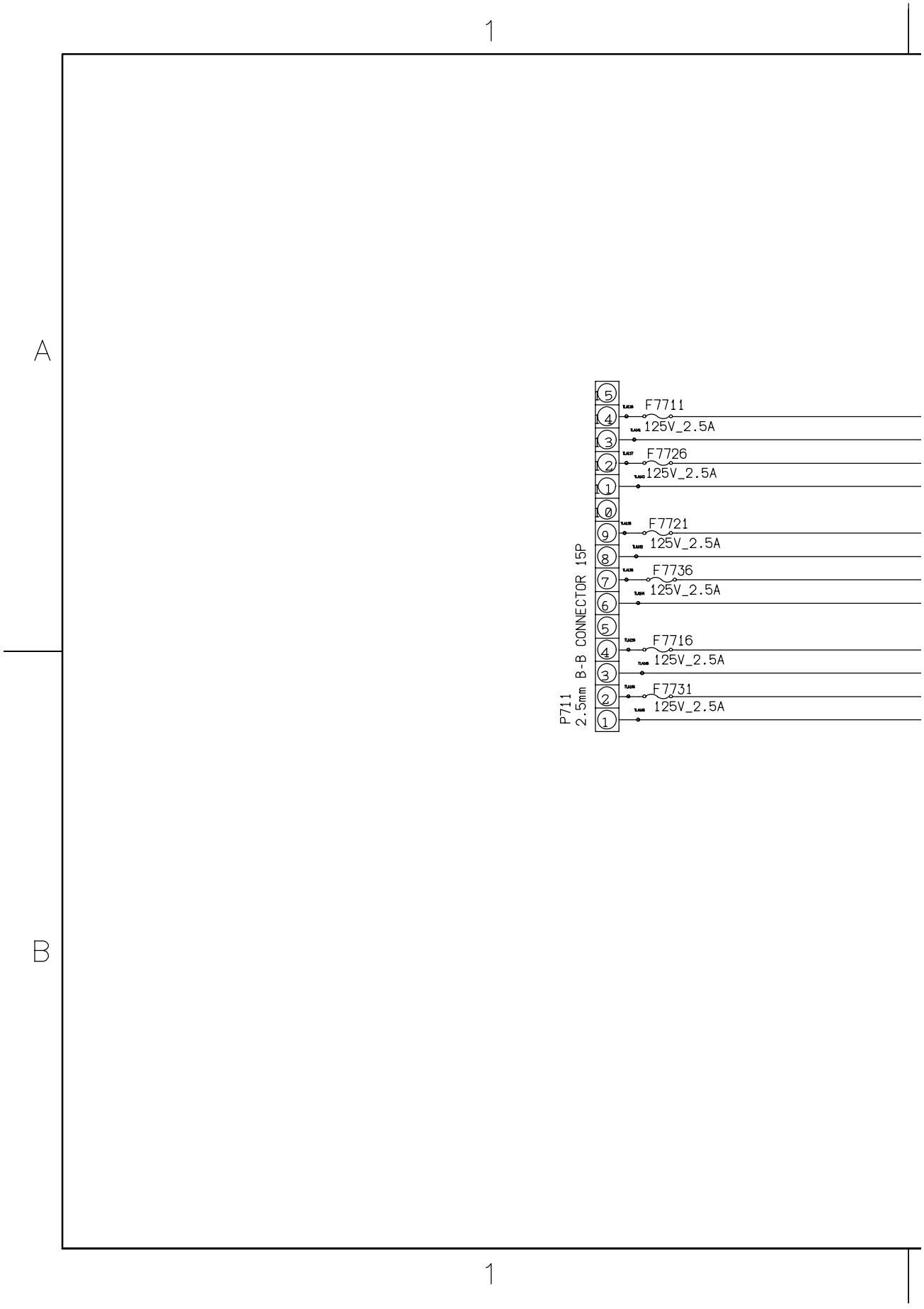
A

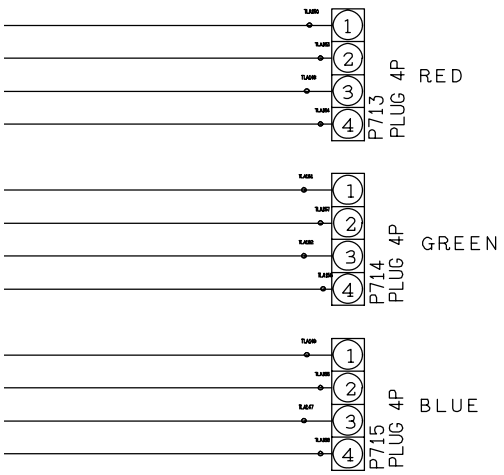
B

51H83/57H83/65H83
DD-CON(1/2)

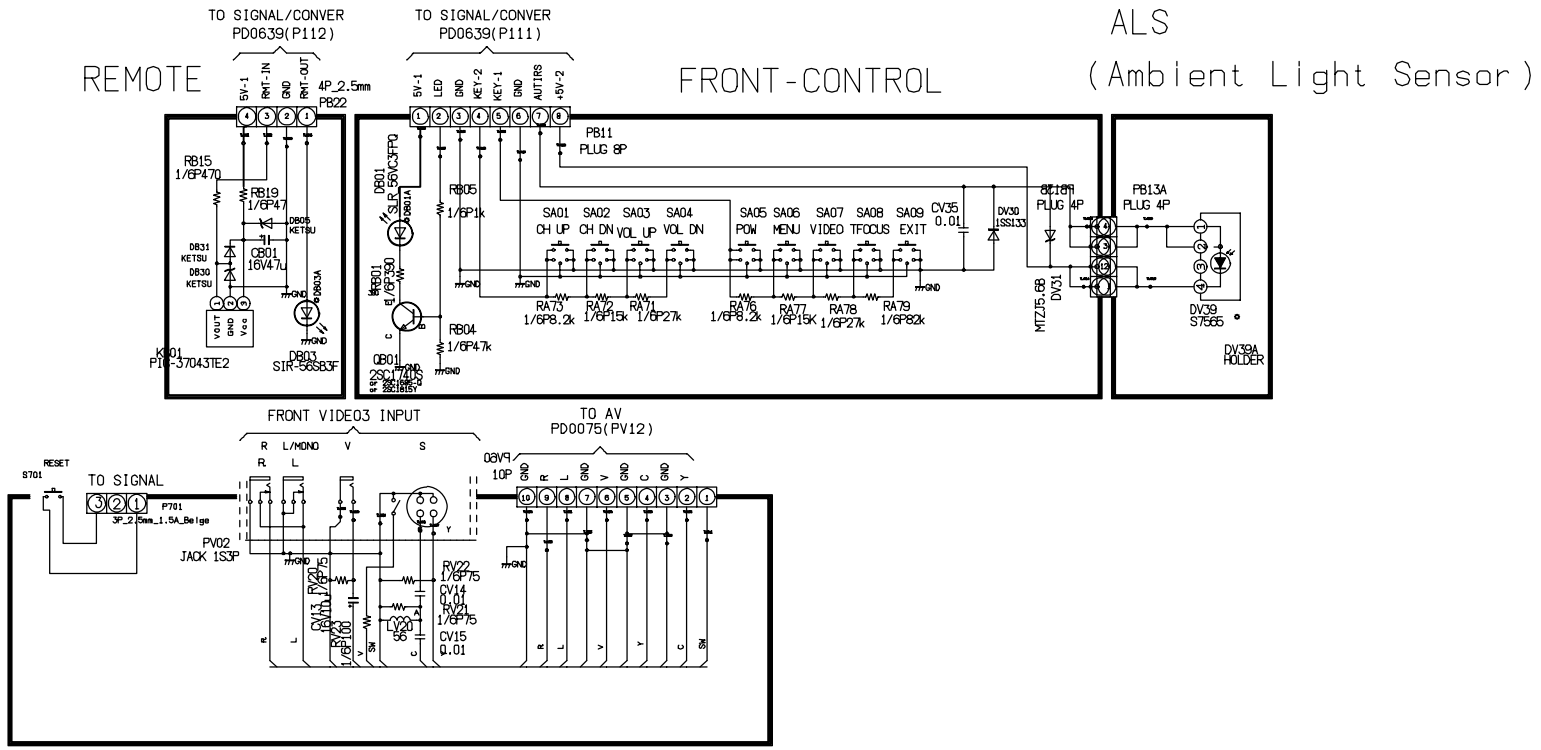


51H83/57H83/65H83
CONVER-OUT(2/2)

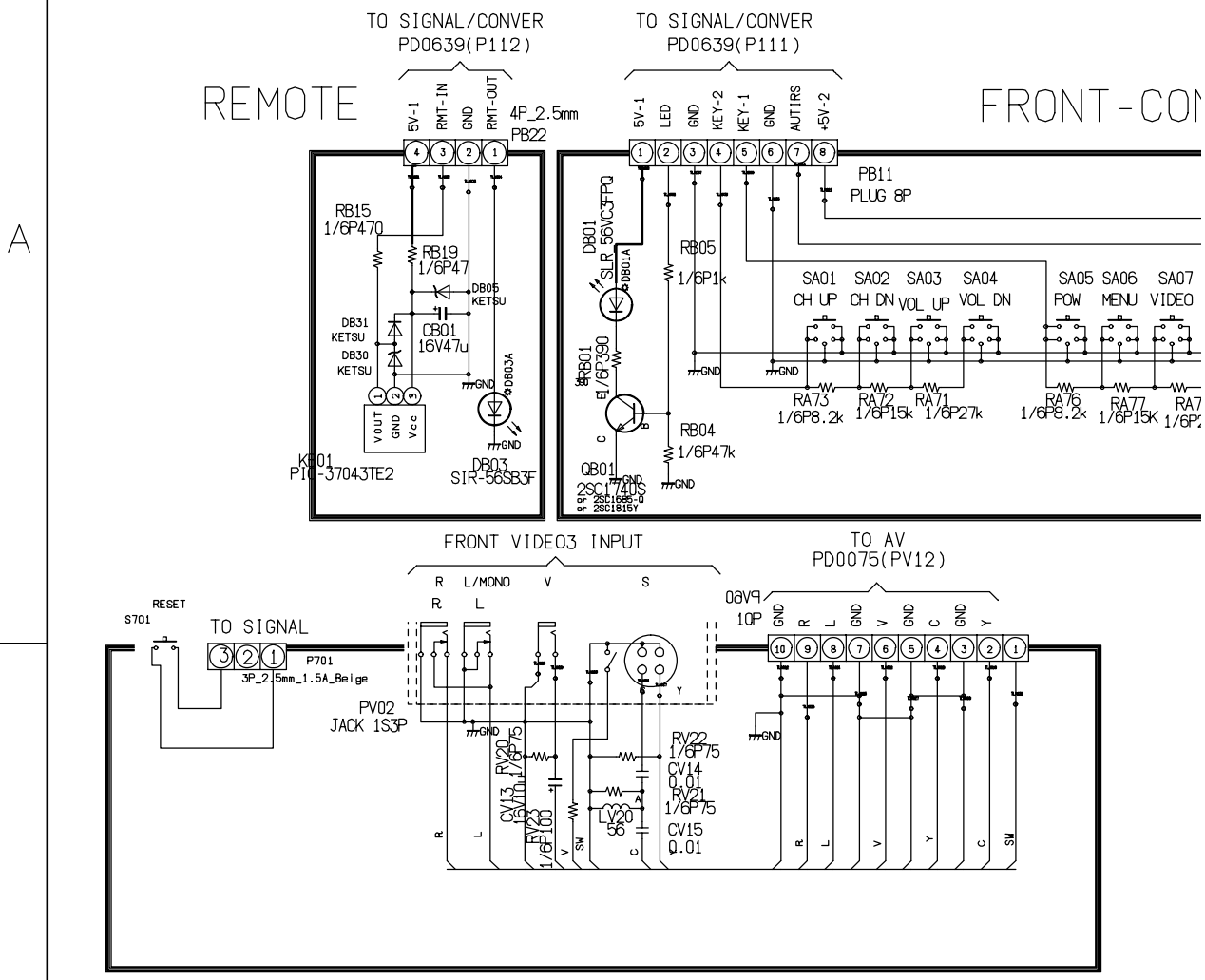

1
A
B
1
P711
2.5mm B-B CONNECTOR 15P
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
F7711
125V_2.5A
F7726
125V_2.5A
F7721
125V_2.5A
F7736
125V_2.5A
F7716
125V_2.5A
F7731
125V_2.5A



51H83/57H83/65H83
CONVER-OUT(2/2)

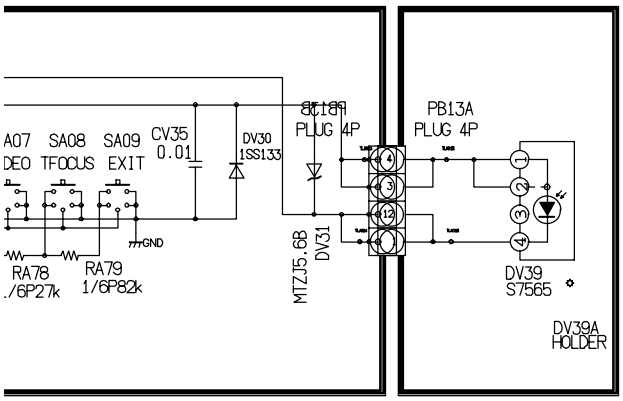


51H83/57H83/65H83
FRONT


TO SIGNAL/CONVER
PD0639(P112)
TO SIGNAL/CONVER
PD0639(P111)
REMOTE
FRONT-CON
5V-1
RMT-IN
GND
RMT-OUT
4P_2.5mm
PB22
5V-1
LED
GND
KEY-2
KEY-1
GND
AUTIRS
+5V-2
PB11
PLUG 8P
RB15
1/6P470
RB19
1/6P47
DB05
KETSU
DB31
KETSU
DB30
KETSU
CB01
16V47u
DB03A
VOUT
GND
Vcc
KB01
PIC-37043TE2
DB03
SIR-56SB3F
DB01
SLR-56VC3FPQ
DB01A
RB01
1/6P390
RB05
1/6P1k
RB04
1/6P47k
QB01
2SC1740S
SA01
CH UP
SA02
CH DN
SA03
VOL UP
SA04
VOL DN
SA05
POW
SA06
MENU
SA07
VIDEO
RA73
1/6P8.2k
RA72
1/6P15k
RA71
1/6P27k
RA76
1/6P8.2k
RA77
1/6P15K
FRONT VIDEO3 INPUT
TO AV
PD0075(PV12)
RESET
S701
TO SIGNAL
P701
3P_2.5mm_1.5A_Beige
PV02
JACK 1S3P
R
L/MONO
V
S
10P
GND
R
L
GND
V
GND
C
GND
Y
RV20
1/6P75
CV13
16V10u
RV23
1/6P100
RV22
1/6P75
CV14
0.01
RV21
1/6P75
CV15
0.01
LV21
LV20
56
FRONT-IN

ALS
(Ambient Light Sensor)

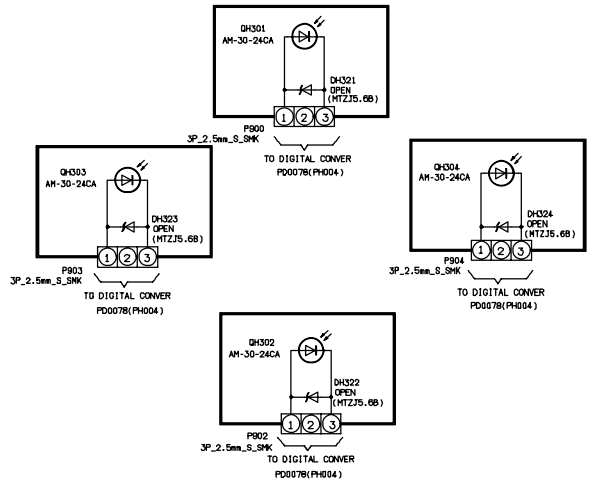
ONTROL



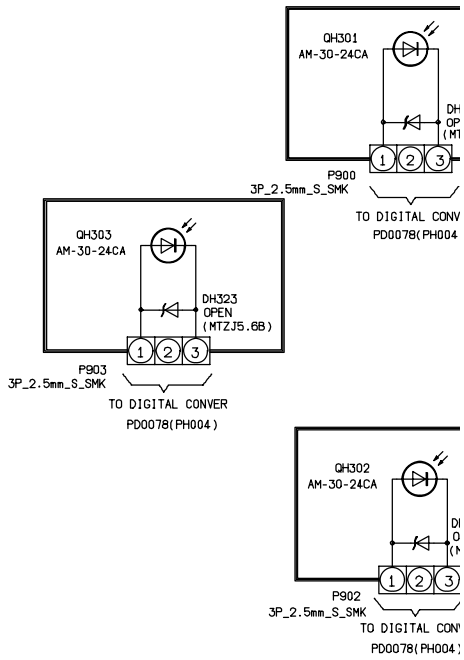
A

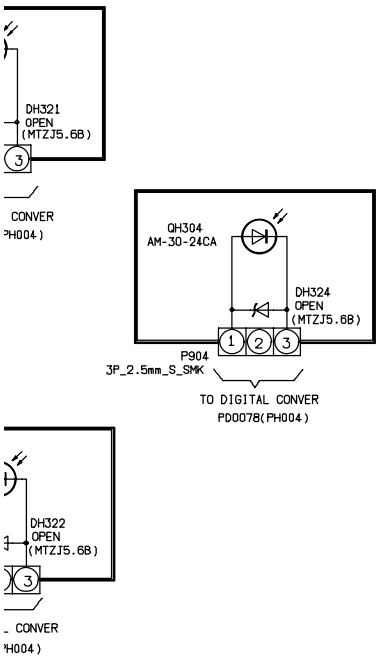
B

51H83/57H83/65H83
FRONT



51H83/57H83/65H83
T.FOCUS-SENSOR

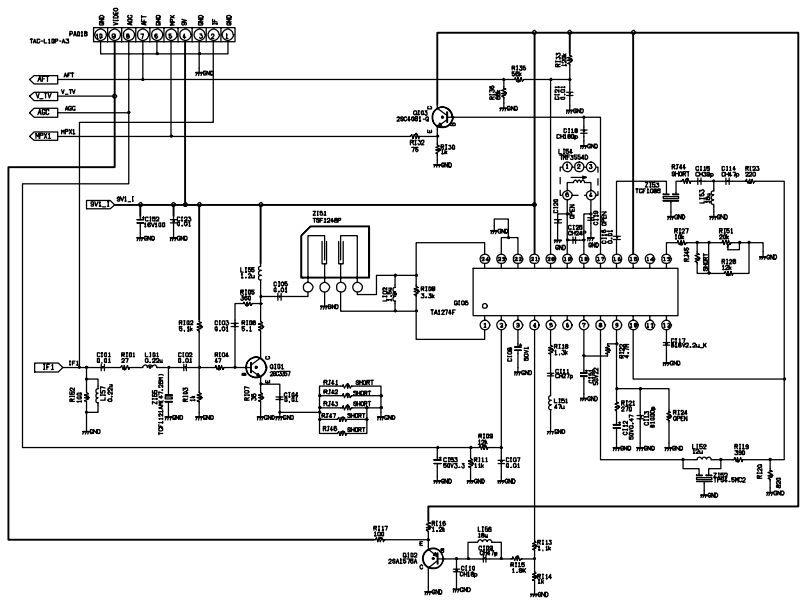

QH301
AM-30-24CA
P900
3P_2.5mm_S_SMK
TO DIGITAL CONV
PD0078(PH004
QH303
AM-30-24CA
DH323
OPEN
(MTZJ5.6B)
P903
3P_2.5mm_S_SMK
TO DIGITAL CONVER
PD0078(PH004)
QH302
AM-30-24CA
P902
3P_2.5mm_S_SMK
TO DIGITAL CONV
PD0078(PH004)



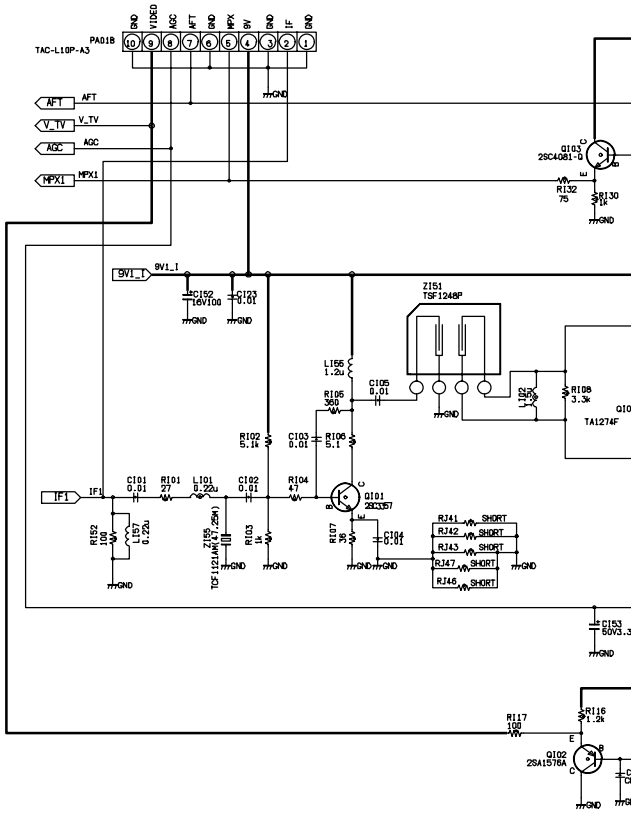
A

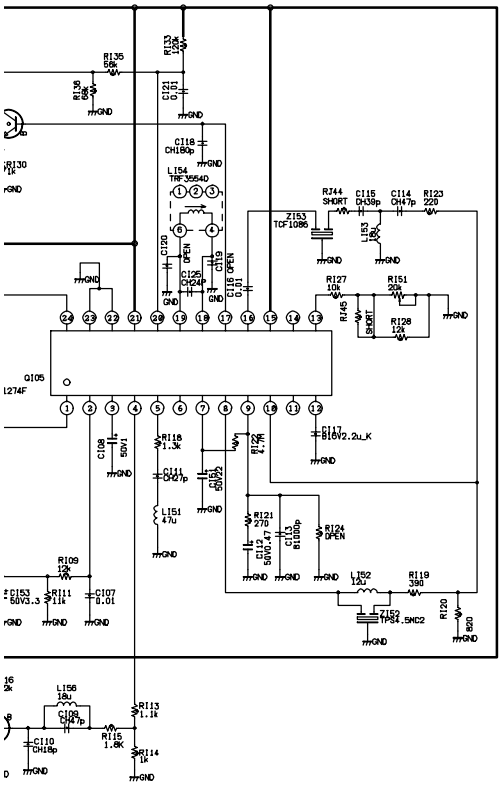
B

51H83/57H83/65H83
T.FOCUS-SENSOR



51H83/57H83/65H83
IF


PA01B
TAC-L10P-A3
GND
VIDEO
AGC
AFT
GND
MPX
9V
GND
IF
GND
AFT
V_TV
AGC
MPX1
9V1_I
IF1
Q103
2SC4081-D
R132
75
R130
1k
C152
16V100
C123
0.01
Z1S1
TSF1248P
L155
1.2u
C105
0.01
R105
360
R108
3.3k
L152
1.5u
TA1274F
R102
5.1k
C103
0.01
R106
5.1
C101
0.01
R101
27
L101
0.22u
C102
0.01
R104
47
Q101
2SC3357
R152
100
L157
0.22u
Z1S5
TCF1121AM(7.25M)
R103
1k
R107
36
C104
0.01
RJ41 SHORT
RJ42 SHORT
RJ43 SHORT
RJ47 SHORT
RJ46 SHORT
C153
50V3.3
R117
100
R116
1.2k
Q102
2SA1576A



51H83/57H83/65H83
IF